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EARLY AND PERIODIC SCREENING, DIAGNOSIS, AND TREATMENT:

Demonstration in Child Health

Medical and Health Research Association of New York City, Inc.
40 Worth Street
New York, New York 10013

in cooperation with

The New York City Department of Health

The New York City Department of Social Services

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16. Abstract (Limit: 200 words)

This is the final report of a one-year study of the Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) program in three Pediatric Treatment Clinics in the South Bronx. This study was carried out in cooperation with the New York City Dept. of Health and Dept. of Social Services.

EPSDT which was founded in 1967 is intended to upgrade delivery of health services to poor children. Although strides have been made, the same conditions that originally led to the inception of EPSDT remain virtually unchanged (poor children suffer more hearing impairment, do not grow as tall as other children, are likely to have twice as many hospital stays, more days lost from school, etc.).

Much in the way of improving conditions remains to be done. The research reported in this paper was designed to be part of that effort. In it, the implementation of EPSDT in a poor neighborhood in New York City was explored. The objective was to test the ongoing system and to test various ways of improving it. Most of the critical areas of EPSDT, such as case finding, screening, diagnosis and treatment, case monitoring, and developmental assessment, were examined.

For the complete EPSDT guidelines in New York City, the reader is referred to "Guidelines for EPSDT Program" located in Appendix A of the report.

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TABLE OF CONTENTS

PAGE

Introduction i

Chapter 1: General Information 1

Chapter 2: Case Finding 8

Chapter 3: Case Monitoring 18

Chapter 4: Developmental Assessment 46

Introduction

This study was carried out under the auspices of the Medical and Health Research Association of New York City, Inc. in cooperation with the New York City Department of Health and Department of Social Services. Funding for the study was provided in part by the Health Care Financing Administration of the United States Department of Health, Education, and Welfare, and also by New York State Department of Social Services. Dr. Margaret T. Grossi, Assistant Commissioner for Maternal and Child Health of the New York City Department of Health served as the Principal Investigator and Forest Williams, Director, Medical Assistance Program of the New York City Department of Social Services served as Co-Investigator.

Development of the study began in 1975. It was originally planned as a three-year study of EPSDT in six of the Child Health Stations in New York City, which was to be a part of a National experiment to be replicated in three other States. As a result of budgetary restrictions and a change in the scope of the research, we were limited to a vastly changed project that was conducted in three Pediatric Treatment Clinics in the South Bronx and was carried out in one year.

The report that follows is the final report of this project which focuses on models of Case Finding, Case Monitoring, and Developmental Assessment.

Chapter 1: General Information

Early Periodic Screening, Diagnosis, and Treatment (EPSDT) is one of the more important, yet little known, Medicaid-related programs. Founded in 1967, it is intended to upgrade the delivery of health services to poor children, many of whom allegedly receive no care or not enough care. Despite its relatively brief existence, it has made impressive strides forward in recent years. In fact, according to the Department of Health, Education, and Welfare, more Medicaid-eligible children are now being served under EPSDT than under all other federally-supported health care programs combined. In the past four years, more than five million health screening examinations--plus the necessary diagnosis and treatment, will have been performed. This reaches a sizable portion of the approximately 11.5 million EPSDT-eligible children. In fiscal year 1977 alone, EPSDT is expected to serve an estimated 2.25 million children. Furthermore, the federal cost of EPSDT (which is approximately $150 million), represents only a fraction of the more than $10 billion in total Medicaid costs.

Still, the same conditions that originally led to the inception of EPSDT in 1967 remain virtually unchanged today. According to a 1976 report by the Office of Child Health Affairs (OCHA), poor children:

1. suffer 23 percent more hearing impairment.
2. do not grow as tall as other children.
3. are more likely to have low hemoglobin values during their years of growth.

4. suffer a higher incidence of impetigo, gastrointestinal diseases, parasitic diseases, and urinary tract infections; and those in urban areas are more often the victims of lead poisoning, and insect and rodent bites.

5. are likely to have twice as many hospital stays, more days in bed, more days lost from school, and more impairment from chronic disease.[1]

Needless to say, much in the way of improving conditions remains to be done. The research to be reported in this paper was designed to be a part of that effort. In it, the implementation of EPSDT in a poor neighborhood in New York City was explored. Our objective was to assess the ongoing system, and to test various ways of improving it. Most of the critical areas of EPSDT, such as case finding, screening, diagnosis and treatment, case monitoring, and developmental assessment, were examined. But before discussing our own project, a brief history and general description of EPSDT will first be presented.

Medicaid

The medical assistance program of Title XIX of the Social Security Act--called Medicaid, was enacted in 1965. Essentially, it established a system in which medical providers (e.g.. private practitioners) are reimbursed by the government for services performed on poor children.

The administration of Medicaid is a federal-state partnership, in that both play a part in financing and designing a state's program.

Up until recently, Medicaid and EPSDT were administered on the federal level by the Medical Services Administration (MSA), a part of the Social and Rehabilitation Services (SRS) of the Department of HEW. But as a result of reorganization, SRS was abolished and its component parts placed in other agencies. Medicaid and EPSDT are now run by the newly formed Health Care Financing Administration of HEW. On the state level, each state designates one agency to design and administer its Medicaid program. In New York that agency is the Department of Social Services.

A state's share of Medicaid expenditures can vary from 22 percent, to 50 percent, and is determined on the basis of the state's per capita income. New York is one of 16 states and territories paying the highest share.

As far as eligibility is concerned, there are minimal federal requirements with various options left open to the states. Federal stipulations call for the inclusion of the following two groups:

1. Title IV - A of the Social Security Act guarantees Aid to Families with Dependent Children (AFDC). This group of eligibles is comprised of members of families with dependent children where one parent is absent, incapacitated or unemployed.

2. Title XVI of the Social Security Act ensures Supplemental Security Income (SSI) to the aged, blind, or disabled.

Eligibility for benefits under one of these other programs - AFDC or SSI, automatically makes one eligible for Medicaid. Both groups of beneficiaries are referred to as the "categorically needy."

States have the option of conferring eligibility on any or all of these groups:

1. "Medically needy." This group is comprised of people meeting all requirements of AFDC or SSI, but whose income is higher than the cut-off point for eligibility set by the state. But if, after deducting medical expenses, their income drops below that cut-off point, they then qualify as medically needy.

2. "Unemployed fathers." This group includes members of poor families where an unemployed father is living at home.

3. "Financially needy." Children under 21 whose families meet state financial eligibility standards, but neither of the categorical requirements are included here. There are three types of "financially needy" children:

    A. Those in foster care, for whom public agencies assume financial responsibility.

    B. Those in psychiatric hospitals.

    C. Those in intermediate care facilities.

New York State covers all optional groups to the fullest possible extent. It is one of only eight states to do so. The others are: California, District of Columbia, Maryland, Massachusetts, Michigan, Pennsylvania, and Wisconsin.

EPSDT

In 1966, just one year after the Medicaid law was passed, a report was issued by HEW on the state of maternal and child health care in America.[2] The report documented that needy children suffered disproportionately from ill health, and yet, did not receive sufficient treatment. The following year, largely on the basis of that finding, Congress extended the scope of the Medicaid law (Title XIX) through an amendment. The amendment required every state operating a

Medicaid program to provide "Early and Periodic Screening, Diagnosis, and Treatment" to all children under 21 who were eligible for Medicaid. EPSDT was intended to provide free preventative, as well as curative health care to poor children. By Feb. 7, 1972, state implementation of EPSDT was required for eligibles under 6 years old. And by July 1,1973, states were required to have implemented EPSDT for eligibles under 21 years old.

In beginning to understand what sets EPSDT apart from the original Medicaid stipulations, the distinction between provision and delivery is useful. As Stewart and Crafton (1975) ably point out, provision means that health facilities and services are available; delivery means that those services reach the patients. Medicaid is concerned only with provision. But under EPSDT, the state becomes responsible for the delivery of health care to poor children. What EPSDT seeks to accomplish is this:

1. To recruit eligibles (i.e. Medicaid eligibles) into the health care system. The ultimate objective is to reach 100 percent of all eligibles.
2. To ensure that once in the system children are screened at the earliest possible times, and rescreened on a regular basis at appropriate age intervals.
3. To ensure that all problems found in screening receive whatever diagnosis and/or treatment that is necessary.
4. To include comprehensive developmental assessment as standard procedure in all screens.
5. To monitor the entire system in order to improve continuity of service and reduce the number of drop-outs.

The definitions of each term comprising EPSDT are helpful in further elucidating its nature and purpose. Early means either as early as possible in a child's life (in the case of a family already receiving assistance), or as soon as a family's eligibility for assistance has been established. As Simon and McArdle point out:

> "The earlier in a child's life that a disease or abnormality can be discovered, the more probable it is that with proper treatment that child can reach his maximum potential as an adult. A child with a developmental problem or hearing loss which goes undetected or untreated will derive little from the usual public school education which is geared to normal, healthy children." [3]

Periodic refers to the necessity of repeating certain screening tests or procedures at prescribed intervals of time. This is done to assure that diseases and/or abnormalities are not present or beginning to develop. During infancy and early childhood, it is important to perform physical examinations, developmental assessment, dental screenings, and other procedures far more than once.

Screening involves the use of quick and simple procedures to sort out apparently healthy individuals from those suspected of having a disease or problem requiring further attention. Its purpose is to identify persons in need of more definitive study. The ideal screening tests are those which yield low false positive and false negative rates. They should be simple to perform, reasonably brief, low cost and readily acceptable to clients.

Diagnosis is defined as the determination of the nature and cause of a disease or abnormality. It has two major purposes:

1. To confirm or disprove the positive results of a screening test.
2. To develop a plan for treating a disease or abnormality if one is found.

Treatment consists of those services needed to control and hopefully cure a health problem. It includes the prevention (e.g., immunization), correction (e.g., eyeglasses), and limitation of a disease or abnormality detected by screening and diagnostic procedures.[3]

For the complete EPSDT guidelines in New York City, the reader is referred to "Guidelines for EPSDT Program" located in Appendix A of this report.

Chapter 2: Case Finding

The objective of the case finding component of EPSDT is to attract as many eligible families as possible into a regiment of regular preventative health care. Case finding entails identifying all children who are eligible for EPSDT, contacting as many of those eligibles as possible, and providing screens for families desiring them.

There are four important areas to consider in studying a case finding effort:

1. The number of eligibles.
2. The number of eligibles contacted.
3. Of those contacted, the number requesting EPSDT appointments.
4. Of those requesting appointments, the number who actually show.

The efficacy of a case finding system can best be assessed if data are available in all four areas. We sought to gather such data wherever possible in the present study.

The case finding system presently used in New York City is administered by the City Department of Social Services (DSS). DSS generates an updated listing of all Medicaid eligibles each month. It tries to reach new eligibles immediately and all others at least once each year. Families are initially contacted through the mail. (The entire contents of the mailing are included in Appendix C.) A

letter is sent to parents describing EPSDT (or CHAP* as it is called in New York). Included in the mailing is a form concerning their children's health care status, which they are asked to complete and mail back to DSS. For each child, there are three response options:

1. Request exam at CHAP clinic
2. Already receiving equivalent health care
3. Attending day care center visited by Health Department

A listing of approved CHAP providers, city wide, is also included in each mailing. If a parent requests an appointment at a CHAP clinic, she fills in the name and address of her preferred clinic. If the child is already under care, the parent writes in the name and address of the clinic, day care center, or private physician that the child is using.

Parents are asked to mail their completed forms back to DSS. If a parent replies that all of her children are already receiving equivalent health care, then no further action is taken. If, on the other hand, she requests an appointment for one or more children, the particular clinic(s) specified is contacted by DSS. The clinic then unilaterally sets an appointment date and informs the family of it. Should the family fail to show, the clinic attempts to arrange another examination date.

In cases where there is no reply at all to the original mailing within two months, a second letter is sent out.

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*CHAP stands for Child Health Assurance Program

If the family again fails to respond, a case worker attempts to make a home visit in an effort to elicit the needed information and/or set up an appointment if requested.

The present study sought to test an alternative case finding technique involving face-to-face contact with prospective families at two public assistance recertification sites. Since all Medicaid eligibles are required to visit a recertification site twice annually for a re-assessment of their public assistance status, this was thought to be an effective way of reaching many eligibles. One of the major problems with the mailing system is that approximately 73 percent of those families sent letters never respond to the contact by returning the form concerned with their children's health care status. It was thought that with face-to-face contact, parents would become a more captive audience and thus, more of them would choose to become involved.

Two different interviewers were used--a public health nurse (PHN) and a case aide (paraprofessional). Both conducted private face-to-face interviews with parents. They informed parents of the nature and availability of CHAP services, answered questions, and arranged screening appointments at PTC's when requested. Both the PHN and case aide were bilingual.

In the face-to-face system, parent's responses to the contact were categorized as follows:

1. Parent requests appointment:
    - A. At project Pediatric Treatment Clinic(PTC)*
    - B. At other approved CHAP provider in the South Bronx (e.g., Martin Luther King Center and Albert Einstein Comprehensive Family Care Service)
2. Parent previously requested CHAP appointment
3. Child already under care:
    - A. At approved CHAP provider
    - B. At non-approved provider
4. Parent declines CHAP service and leaves no indication that a child has a regular health care provider

The original rational for testing a new case finding system centered around the assumption that few eligible families were already under care.

Description of the Samples Interviewed by the PHN and Case Aide

A total of 1524 families were interviewed during the project - 990 by the PHN and 534 by the case aide. Data was gathered on the mother's or guardian's ethnicity, language, age, education, and years of residency in New York City (see Tables 2-1 through 2-6). An age distribution for children under 6 was also obtained. By and large, the PHN and case aide subsamples were equivalent in all respects. For example, 70.2 percent of the PHN's clients were Hispanic as compared to 72.6 percent of the case aide's clients.

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*For a full description of what a Pediatric Treatment Clinic is, see Chapter 3.

Most of the remaining clients in both subsamples were Black (28.9 percent and 27.1 percent for the PHN and case aide, respectively). 34.7% of the PHN's clients and 39.7% of the case aide's spoke little or no English. Overall, across both subsamples, 53.7% of the mothers and guardians were between the ages of 19 and 30, 20.2% were high school graduates, and 21.1% were born in New York City.

Data Sources

The data reported in the remainder of this chapter were obtained from two sources--the project 'Linkage' form which was filled out by the interviewer (see Appendix B) and records supplied by the New York City Human Resources Administration (HRA).

Mailing vs. Face-to-Face Contact

The first critical comparison in the case finding section was between the city-wide CHAP mailing system and the face-to-face procedure tried at the recertification sites. The ongoing mailing system was continued for families living in zip code area 10451. It was discontinued for families living in zip code areas 10454 and 10459. Eligibles living in these areas were interviewed by the PHN and case aide

at the recertification sites. It was hypothesized that face-to-face contact would be more effective than the mailing system. In the face-to-face system, the parent's undivided attention could more readily be assured, and any doubts, questions, or misunderstandings could be addressed promptly as they occurred. In comparing the two systems, number of contacts, appointment requests, and shows were measured. Higher rates of each were expected in the face-to-face than in the mailing system.

The results of the mailing vs. face-to-face comparison are shown in Table 2-7. Although the mailing system had higher show rates than the face-to-face system, what was most striking was that those rates were exceptionally low in both systems. Overall, only 5.9% of all eligibles contacted showed for appointments. The low rates are attributable to the surprisingly high number of families already under care. This, in itself, represents the major finding of this section. As seen in Table 2-8, 83% of the children whose families were interviewed were said ~~to~~ already be under care. Of those, 28.7% used approved CHAP providers and 71.3% used non-approved providers. A frequency distribution of the specific non-approved sources identified in the interviews is presented in Table 2-9. Notice that Medicaid clinics are easily the most popular of these, accounting for nearly 40% of all cases.

PHN vs. Case Aide

The second comparison was between the PHN and case aide. Both performed the same functions in their roles as case finders. However, because of the PHN's greater expertise in the health care area and the aura of her professional status, it was hypothesized that she would be the more successful case finder of the two. The greater expertise and status of the PHN would better enable her to answer more questions and allay any fears the parent might have had about EPSDT. This in turn was expected to result in a higher number of contacts, requested appointments, and shows. The relative efficacy of the PHN vs. case aide was judged on the basis of these measures.

The results of the PHN vs. case aide comparison are shown in Table 2-10. As hypothesized, the PHN was the more effective of the two interviewers. The PHN interviewed 990 families, as opposed to 534 families for the case aide. Not only did the PHN reach nearly twice as many clients as the aide, but she also devoted a greater percentage of her work week to interviewing as opposed to clerical and other tasks (see Table 2-11). The PHN spent 38.6% of her time actually engaged in interviewing while the case aide devoted only 24.7% of her's. The data also reveal that the PHN had used her interviewing time more efficiently. She

interviewed almost twice as many clients as the case aide in about one and one half times the amount of time.

Finally, the PHN elicited 125 appointment requests as compared to 30 for the case aide. What is an even more startling comparison is that 43 of the PHN's clients showed for CHAP screens while only one of the case aide's showed.

Project PTC vs. Other Approved CHAP Provider Requests

The third comparison was concerned with the manner in which appointment requests within the face-to-face contact were processed. A parent could have requested an appointment either with a Project PTC or with an approved CHAP provider other than a Project PTC. The parent's requests were handled by the project staff if they were for a project PTC, otherwise, requests were processed by the New York City CHAP office.

When a Project PTC was selected, the case finder called the PTC immediately to set up an appointment. All appointments were made bilaterally (i.e.. at the convenience of both the PTC and the parent). Furthermore, all appointments were scheduled within two weeks of the request. In contrast, when another approved provider was selected, the interval between interview and appointment date was far longer. Also, all appointments were set unilaterally (i.e., by the provider alone). Because of these differences, a higher

show rate was hypothesized for Project PTC requests than for other approved provider requests.

The results for this comparison are presented in Table 2-12. The hypothesis was resoundingly supported. A respectable 58.7% of all families requesting Project PTC appointments later showed. However, according to the data supplied by HRA, none of the 80 appointment requests made to other approved CHAP providers resulted in no shows. It should be noted, though, that most of these 80 cases do not appear to have any data entries in the HRA records during the project period. Further inquiries into tracing these cases would have to be made in order to determine whether or not they actually showed. Such inquiries are beyond the scope of the present project.

Summary

The results of this study demonstrate two points: (1) face-to-face discussion of EPSDT services with families does not increase the rate of shows for appointments over that of a mailing system, and (2) within a face-to-face system, a health professional (PHN) is more successful than a paraprofessional.

With respect to point one, it is important to keep in mind the fact that neither the face-to-face or mailing systems produce high show rates. In fact, many families report that their children are already receiving adequate

health care. Given this as a base, there are few cases left to 'find'. This fact highlights the clear need for the assessment of these 'already under care' cases in order to determine the sources and nature of their care.

While the face-to-face contact was not very effective in this study, there may arise instances where it is practical or desirable. In such instances, these results indicate a definite benefit of a health professional's role in this type of contact.

Table 2-1: Mother's or Guardian's Ethnicity

Case Finding Sample

Ethnicity	PHN Clients	Case Aide Clients	Total
Black	(286) 28.9%	(144) 27.1%	(430) 28.3%
Hispanic	(694) 70.2%	(386) 72.6%	(1080) 71.1%
White & Other	(8) 0.8%	(2) 0.4%	(10) 0.7%
Total	(988) 100.0%	(532) 100.0%	(1520) 100.0%

Table 2-2: Mother's or Guardian's Language

Case Finding Sample

Language	PHN Clients	Case Aide Clients	Total
English Only	(295) 29.80%	(152) 28.52%	(447) 29.35%
Spanish & English	(350) 35.35%	(169) 31.71%	(519) 34.08%
Spanish Only	(344) 34.75%	(212) 39.77%	(556) 36.51%
Other Language	(1) 0.10%	(0) 0.0%	(1) 0.07%
Total	(990) 100.0%	(533) 100.0%	(1523) 100.0%

Table 2-3: Mother's or Guardian's Age

Case Finding Sample

Age	PHN Clients	Case Aide Clients	Total
Under 19	(13) 1.32%	(15) 2.82%	(28) 1.84%
19 - 22	(173) 17.53%	(100) 18.80%	(273) 17.97%
23 - 26	(180) 18.24%	(81) 15.23%	(261) 17.18%
27 - 30	(175) 17.73%	(107) 20.11%	(282) 18.56%
31 - 35	(196) 19.86%	(101) 18.98%	(297) 19.55%
Over 35	(250) 25.33%	(128) 24.06%	(378) 24.88%
Total	(987) 100.0%	(532) 100.0%	(1519) 100.0%

Table 2-4: Mother's or Guardian's Education

Case Finding Sample

Years of Education	PHN Clients	Case Aide Clients	Total
0 - 5	(159) 16.14%	(76) 14.29%	(235) 15.49%
6 - 7	(129) 13.10%	(54) 10.15%	(183) 12.06%
8 - 11	(498) 50.56%	(294) 55.26%	(792) 52.21%
12	(166) 16.85%	(100) 18.80%	(266) 17.53%
Over 12	(33) 3.35%	(8) 1.50%	(41) 2.70%
Total	(985) 100.0%	(532) 100.0%	(1517) 100.0%

Table 2-5: Mother's or Guardian's Years of Residency in New York City

Case Finding Sample

Years	PHN Clients	Case Aide Clients	Total
1- Not Born in NYC			
A. 0 - 5 years	(142) 14.45%	(48) 9.07%	(190) 12.57%
B. 6 - 10 years	(219) 22.28%	(131) 24.76%	(350) 23.15%
C. 11 - 15 yrs.	(150) 15.26%	(82) 15.50%	(232) 15.34%
D. Over 15	(278) 28.28%	(142) 26.84%	(420) 27.78%
2- Born in N.Y.C.	(194) 19.74%	(126) 23.82%	(320) 21.16%
Total	(983) 100.0%	(529) 100.0%	(1512) 100.0%

Table 2-6: Child's Age—Case Finding Sample

Age	PHN Clients	Case Aide Clients	Total
0-6 months	(71) 5.34%	(51) 7.14%	(122) 5.97%
6-12 months	(105) 7.89%	(63) 8.82%	(168) 8.22%
1-2 years	(231) 17.37%	(132) 18.49%	(363) 17.76%
2-3 years	(245) 18.42%	(117) 16.39%	(362) 17.71%
3-4 years	(202) 15.19%	(113) 15.83%	(315) 15.41%
4-5 years	(236) 17.74%	(128) 17.93%	(364) 17.81%
5-6 years	(240) 18.05%	(110) 15.41%	(350) 17.12%
Total	(1330) 100.0%	(714) 100.0%	(2044) 100.0%

Table 2-7: Comparison of Eligibles, Contacts, Appointment Requests, and Shows Between the Mailing and Face-to-Face Contact Systems

	Contact System		
	Mailing	Face-To-Face	Total
Eligibles	1710 H	4749 H	6459
Contacts	544 H	1524 P	2068
Appointment Requests	No data H	155 P	—
Shows	78 H	44 HP	122
Shows per eligible	4.6%	0.9%	1.9%
Shows per contact	14.3%	2.9%	5.9%
Shows per appt. requests	—	28.4%	—
Appt. requests per eligible	—	3.3%	—
Appt. requests per contact	—	10.2%	—
Contacts per eligible	31.8%	32.1%	32.0%

H—Source of information: HRA records

P—Source of information: Project "Linkage" form.

Table 2-8: Health Care Status of Children in Families Contacted in the Face-To-Face System

	Aide	PHN	Total
1. Parent Requests Appt. During Interview			
A. At Project PTC	(4) 0.3%	(94) 3.4%	(98) 2.3%
B. At other Approved CHAP Provider	(63) 4.2%	(141) 5.0%	(204) 4.7%
C. Total Appt. Requests	(67) 4.5%	(235) 8.4%	(302) 7.0%
2. Parent Previously Requested CHAP Appt.	(3) 0.2%	(30) 1.1%	(33) 0.8%
3. Child Already Under Care			
A. At Approved CHAP Provider	(383) 25.6%	(639) 22.9%	(1022) 23.8%
B. At Non-Approved Provider	(976) 65.2%	(1560) 55.9%	(2536) 59.2%
C. Total Already Under Care	(1359) 90.8%	(2199) 78.8%	(3558) 83.0%
4. Parent Declines CHAP Services—No Indication That Child has a regular health care provider	(68) 4.5%	(325) 11.7%	(393) 9.2%
Total	(1497) 100.0%	(2789) 100.0%	(4286) 100.0%

Table 2-9: Frequency Distribution of Non-Approved Providers Being Used

Provider	Case Aide Clients	PHN Clients	Total Clients
Lincoln Hospital Pediatric Clinic	(168) 12.4%	(87) 3.9%	(255) 7.2%
Montefiore Hospital	(3) 0.2%	(1) 0.1%	(4) 0.1%
Private Physician	(23) 1.7%	(92) 4.2%	(115) 3.2%
Bronx Municipal Hospital	(4) 0.3%	(14) 0.6%	(18) 0.5%
Private Medicaid Clinic	(137) 10.1%	(1193) 54.3%	(1330) 37.4%
Columbia Presbyterian Hospital	(3) 0.2%	(7) 0.3%	(10) 0.3%
Mt. Sinai Hospital	(21) 1.5%	(19) 0.9%	(40) 1.1%
Metropolitan Hospital	(10) 0.7%	(6) 0.3%	(16) 0.4%
Centro de Salud Latino	(92) 6.8%	(0) 0.0%	(92) 2.6%
Other Health Dept. Clinic	(0) 0.0%	(1) 0.1%	(1) .03%
Other	(496) 36.5%	(125) 5.7%	(621) 17.5%
Provider Not Specified by Parent	(402) 29.6%	(654) 29.6%	(1056) 29.7%
Total	(1359) 100.0%	(2199) 100.0%	(3558) 100.0%

Table 2-10: Comparison of Eligibles, Contacts, Appointment Requests, and Shows Between the PHN and Case Aide

	Interviewer		
	PHN	Case Aide	Total
Eligibles	2374^{H}	2374^{H}	4748
Contacts	990^{P}	534^{P}	1524
Appointment Requests	125^{P}	30^{P}	155
Shows	43^{HP}	1^{HP}	44
Shows per eligible	1.8%	0.04%	0.9%
Shows per contact	4.3%	0.2%	2.9%
Shows per appt. requests	34.4%	3.3%	28.4%
Appt. requests per eligible	5.3%	1.3%	3.3%
Appt. requests per contact	12.6%	5.6%	10.2%
Contacts per eligibles	41.7%	22.5%	32.1%

H—Source of Information: HRA records
P—Source of Information: Project "Linkage" form.

Table 2-11: Comparison of Activities Performed by the Case Aide and PHN

	Case Aide	PHN	Overall Mean
Interviewing and Follow-up	(6.89)[1] 24.7%[2]	(10.59) 38.6%	(8.93) 32.3%
Clerical and Administrative	(18.98) 68.0%	(14.43) 52.7%	(16.47) 59.6%
Time Unaccounted For	(2.05) 7.3%	(2.37) 8.7%	(2.23) 8.1%
Total Hours Worked Per Week	(27.92) 100.0%	(27.39) 100.0%	(27.63) 100.0%

1—Numbers within parentheses represent mean number of hours per week.

2—Percentages represent percentage of time per week.

Table 2-12: Comparison of Appointment Requests and Shows
Between Project PTC Requests and Other Approved
CHAP Provider Requests

	Request Type		
	Project PTC	Other Approved CHAP Provider	Total
Appointment Requests	P 75	P 80	155
Shows	P 44	H 0	44
Shows per Appt. Requests	58.7%	0.0%	28.4%

H—Source of Information: HRA records.
P—Source of Information: Project "Linkage" form.

Chapter 3: Case Monitoring: Screening, Diagnosis and Treatment

New York City Child Health Stations

In 1910, a network of community child health facilities was established in N.Y.C. The facilities, called child health stations (CHS's), were located mostly in poor neighborhoods. They had the dual purpose of educating mothers and distributing whole milk for young babies.[4] The program was gradually expanded to include periodic health and growth appraisal, immunization, parental counseling, and referral of preschool children to a treatment - agency for care of abnormal findings.[5]

Over the years, the CHS's have been used widely by many communities as reliable sources of preventative health care. In 1976, there were 57 CHS's in operation citywide, with a total registration of 106,097. In 1976, 24.9 percent of all newborn infants in NYC were registered at CHS's. While each CHS is slightly different, the general model is designed to accommodate two physicians working at the same time. It has waiting space for 30 people, a reception area, a playroom, and toilet facilities for mothers and children.

In 1972, it was decided to extend the scope of 19 CHS's to include acute care for minor illnesses. CHS's as they existed provided preventative, but not sickness care. These expanded CHS's, called pediatric treatment clinics (PTC's), were established for several reasons. One primary reason was that there was much concern over the citywide drop in CHS enrollment, from 178,844 in 1968 to 125,688 in 1972. It was thought that the addition

31<

of sickness care would be instrumental in stemming the tide of that decrease.

The changes made as a result of this conversion were in five general areas:[5]

Staffing. The major change here was the hiring of a full-time board-certified pediatrician to direct the clinic. Traditionally, many part-time physicians were used. The other standard PTC staff included one or more pediatric practitioners, a public health nurse, two public health assistants, a laboratory technician, and one clerk. The exact number of each depended upon the caseload of the given clinic.

Scope of services. The PTC's were set up to provide primary preventative care and the treatment of minor illnesses for preschool children. They were designed to handle such problems as the treatment of acute respiratory infections, diarrheal diseases, skin infections, and other uncomplicated ailments.

Laboratory. Equipment was added to perform the following diagnostic tests: urinalysis, throat culture, white blood count, differential count and red cell morphology, and gram stain. Specimens for additional tests were taken and sent to the Department of Health centralized laboratory for testing (e.g., lead tests and hemoglobin-electrophoresis).

Back-up facility. Arrangements with back-up hospitals were negotiated to provide specialty consultation, diagnostic services and hospitalization.

New York City CHS's as EPSDT Providers

All CHS's are official NYC providers of EPSDT screenings. One of the major problems facing EPSDT nationally is high turnover of Medicaid eligibility. It has been estimated that close to 35 percent of families on Medicaid lose their eligibility during the course of a year.[6] Because loss of elibility means loss of free EPSDT services in most states, this causes a large number of families to drop out of their respective programs. However, this problem does not arise in CHS's, because they provide free EPSDT services to both Medicaid and non-Medicaid families. This allows the continuity of EPSDT to remain intact, since loss of eligibility does not affect accessibility of services in any way.

A second important issue concerns whether or not diagnosis and treatment are provided at the same facility as screening. All three CHS's used in this study were PTC's, which meant that a considerable amount of diagnosis and treatment were available on the premises. The provision of screening, diagnosis and treatment at the same facility is a major advantage. Clearly, the mother's task of having her children screened becomes decidedly easier when she can also have them treated at the same location, often during the same visit.

33<

SDT screens are provided for children up to five years of age at the CHS's. The City Health Department recommends that 14 screens be given between birth and five during prescribed age intervals (see Appendis A). Parents are encouraged to bring their children in for all due screens at the appropriate times. The CHS staff tries to ensure that all due components of a screen are given, and that appointments for periodic rescreens are arranged. If a screen uncovers any abnormalities requiring an additional visit for diagnosis/treatment, a referral is made either within the CHS itself to another health department service such as a TB clinic, or to some outside facility. The staff monitors all referrals to ensure that as many as possible are resolved.

The Rationale for Using a Case Monitor

What typically happens at CHS's is that case monitoring activities are handled by several nurses and clerks. Rarely is any one individual assigned to them full-time. This delegation of the monitoring function to different individuals can potentially lead to discontinuity and disorganization. Furthermore, the project CHS's were located in the South Bronx, which is a predominantly Hispanic community, but very few of the staff members there are bilingual. It was therefore hypothesized that the insertion of a single individual into the system as a full-time monitor would be a helpful addition. It was thought that

the best type of person for this position would be a paraprofessional-level and bilingual employee. Paraprofessional status was advantageous from a cost effectiveness standpoint. Although the employee represented an additional staff member, the extra cost was minimal; and bilingual ability enabled the individual to communicate with the entire caseload, 65.8 percent of whom were Hispanic.

These additional employees, called case monitors, were used at the Mitchell and Tinton PTC's, but not at the Melrose PTC. Melrose served as the control clinic in the study. There, a clerk was inserted simply to collect comparison data; she did not intervene in PTC operations in any way.

The Case Monitor Function

It should be emphasized that case monitors did not perform new functions at the PTC's, but rather, helped out with tasks already being handled by several others. They were essentially responsible for monitoring screening completion and problem resolution.

Screening Completion. The form used by New York City CHS's to record screening results is called the "CHAP-1" (see Appendix B). CHAP stands for Child Health Assurance Program. It is the name given to the EPSDT program by the State Department of Social

Servides (DSS). In New York, the term CHAP is used interchangably with EPSDT. All exam components and immunizations mandated on one or more of the 14 scheduled screens between birth and five are listed on the form. From the child's age, the case monitor determined which one of the 14 screens the child was scheduled to have. She then indicated on the CHAP-1 all exam components that were due, as a guide to clinicians who would later examine the child.

Upon completion of the examination, the child's CHAP-1 form was shown to the case monitor. The monitor reviewed the form to confirm that all components had been done and available results entered. If a screen was found incomplete (e.g., if a three-year-old had not received a vision or hearing test), it was brought to the attention of the public health nurse (PHN). The PHN would then arrange to have the missing component(s) completed before the child left the clinic.

An effort was made to complete all screens in one visit, since prompt return visits were oftentimes difficult to arrange and broken appointment rates were high. If a screen was not completed in a single visit, monitors scheduled another appointment as soon thereafter as possible. When the child's first screen during the study was completed, the monitor set up an appointment for the next one. For appointments made far in advance, they mailed reminders to parents a week ahead of time and followed-up on broken appointments.

Problems Requiring Treatment

When a child appeared for a screening, monitors attached the project "Referral Form" to his CHAP-1 (see Appendix B). This form was used by the clinician if a problem was identified which required treatment. Treatment was provided at either the PTC conducting the screen or to an outside facility. If an outside facility was selected, the monitor called to make the arrangements. Those problems which were of a very minor nature were usually treated at the PTC on the very same day as the screen. Such problems are not, in the traditional sense, "referrals". Other problems were also identified which required either a subsequent visit to the PTC or referral to another source of care. These problems are "referrals". For the purposes of this report, we will be discussing all problems requiring treatment as a group due to the fact that the PTC's were capable of treating many of the problems identified during the screening visit.

The monitor tried to ensure that cases were resolved as quickly as possible. A case was considered resolved when the child was cured, treatment was not advisable, or maximum benefit was achieved. When a "Referral Form" was returned to the PTC from an outside facility, the monitor determined whether or not the case was resolved. If not resolved, the monitor intervened through various follow-up attempts.

Results

Conducting the Entire Screen

Screens due. The birth to five-year period is divided into 14 age intervals. These will henceforth be referred to as phases. One screen is due during each phase, the components of which are prescribed by the NYC CHAP guidelines as a function of age. We derived the number and type of due screens for each child from his birth and registration dates, and the project ending date. This was done according to the following rules: First, the phase in which registration occurred was always considered due. Second, all subsequent phases occurring between the registration and ending dates were also due. And third, to make allowances for the fact that the last phase was usually at least partially cut off by the ending date of the project, that phase was not considered due unless:

1. A screen was begun more than one month before the ending date. In this instance, the phase was considered due regardless of whether it was completed. It was felt that a month was sufficient time to complete a screen.
2. A screen was begun less than a month before the ending date, but completed. In this case, the screen was considered as both due and completed.

38<

A frequency distribution of the number of due phases per child is presented in Table 3-1a. The mean number of due phases per child was 2.2. Of course, as can be seen on the periodicity chart, younger children were due to have more screens than older children.

Screens initiated. The number of screens initiated was defined as the total number of screens started, regardless of whether or not they were completed.

Screens completed. A screen was completed when (a) it was started and completed within a single phase, and (b) all components of it were done. Screens failing to meet both requirements were defined as incomplete.

Rate of initiation. This measure was concerned with the extent to which children received their correct number of screens. For each child, the number of screens initiated was divided by the number of screens due. So that if four screens were due and three were initiated, the child's screen

$$\text{Rate of Initiation} = \frac{\text{Number of screens initiated}}{\text{Number of screens due}}$$

initiation score would be .75 (i.e., the child would have received 75 percent of his required number of screens). The case monitors (who again, were project staff members), were actively involved in scheduling children for screens. Because of this added effort, it was expected that screen

initiation rate would be higher in the monitor PTC's (Mitchell and Tinton) than in the no monitor PTC, Melrose (see Tables 3-2a through 3-2d for distribution of initiated screens). A one-way analysis of variance was performed on the data to test this hypothesis. The results are shown in Table 3-2e.

The results of this analysis indicate that the three PTC's did not initiate equivalent numbers of due screens. The results show that Mitchell, a monitor PTC, initiates a greater percentage of due screens (94.3%) than either of the other two clinics. However, when we combined the rates of Mitchell and Tinton to compare monitor PTC's with the control PTC (Melrose), no significant effect was found.

Rate of completion. This measure was concerned with the extent to which screens were started and completed within a single phase, and all due components given. It was derived by dividing the number of screens completed by the number due.

$$\text{Rate of Completion} = \frac{\text{Number of screens completed}}{\text{Number of screens due}}$$

A higher rate was expected in the monitor PTC's (see Tables 3-3a through 3-3d for distribution of completed screens). The results of the ANOVA are presented in Table 3-3e. Contrary to our expectations, Melrose shows a significantly higher rate of completed to due screens (49.9%) than both monitor

clinics (32.4% at Tinton and 42.4% at Mitchell).

Number of visits required on initiated and completed screens.

The PTC staff tried to conduct all screens in a single visit. The most frequent causes of failure to complete in one visit included late arrival for a morning or afternoon session, which didn't allow the staff the time it needed; an unusually large number of unexpected sickness visits, which tended to delay the child's passage through the PTC; and parents falsely assuming that all due components had been done, and leaving prematurely.

A frequency distribution of visits required to conduct screens in each PTC is presented in Table 3-4a. Notice that overall, the vast majority of all screens (83.1%) was done in one visit. Furthermore, fewer than three percent of all screens required three or more visits. Thus, it would seem that the PTC's are meeting their objective of conducting screens promptly.

Case monitors were given the task of checking a child's folder when the family was ready to leave. If she found that required components were missing she encouraged the parent to stay and make them up if at all possible. Because of these activities on the part of the monitor, it was hypothesized that screens would be completed in fewer visits at Mitchell and Tinton than at Melrose, the control clinic. The results of the ANOVA's for initiated and completed screens are shown in

41<

Tables 3-4c and 3-4d. The hypothesis did not receive support in either case.

Time interval required to conduct initiated and completed screens.

A second measure of promptness was the time interval required to conduct screens. A frequency distribution of screening intervals for each PTC is shown in Table 3-5a. In recording this data, the case monitors and control clerk awaited the return of all laboratory results before assigning a completion date to the screening interval. This accounts for the discrepancy found between the number of screens conducted in one visit (which was 1201 overall), and the number of screens conducted in their entirety on the same day (which was only 875). In any event, both sets of results suggest that by and large, screens are being done promptly.

If second and third visits were required to complete a screen, the case monitor tried to schedule those appointments at the earliest possible time. This was done in order to complete screens during the same phase in which they were started, in accordance with CHAP periodicity guidelines. Because monitors made an explicit effort to stay within those guidelines -- by treating the ending dates of phases as deadlines, it was expected that screens would be completed in less time at Mitchell and Tinton than at Melrose. The results of the ANOVA's

for initiated and completed screens are presented in Tables 3-5c and 3-5d. As can be seen from these tables, there was no difference among the three clinics with regard to the time interval required to conduct a screen with intervals ranging from 19.3 days at Melrose to 23.2 days at Tinton and 20.3 days at Mitchell.

Broken appointments. The broken appointments problem is one that has plagued EPSDT programs since their inception. High rates of unkept appointments can result in idle staff and, thus, in unacceptable cost effectiveness. According to a recent report by the Children's Defense Fund, broken appointment rates can sometimes run as high as 50 percent in an EPSDT program.

In the present study, the case monitors and control clerk kept records of all broken appointments once a child was registered into the project. However, they had no records of broken appointments that might have taken place prior to registration. A child's first show at a PTC during the project period (at which time he was likely to have been registered), might very well have been preceded by several unkept appointments. In fact, broken appointment rate is typically higher for first visits to providers than for subsequent visits. For this reason, the data reported here (which includes only records for subsequent visits), will reflect lower broken appointment rates than probably existed overall. A frequency distribution of broken appointments in the present study is shown in Table

3-6a. Overall, one or more appointments were broken on only 8.5 percent of all screens.

Broken appointment rate was obtained by dividing the number of broken appointments by the total number of appointments made. There were 1974 total appointments, of which

$$\text{Broken Appointment Rate} = \frac{\text{Number of broken appointments}}{\text{Total number of appointments made}}$$

1735 were kept and 239 broken. Thus, the broken appointment rate was 12.1 percent. According to Wilson and O'Keefe (1974), a rate of 15 percent or lower is optimal. It would appear that the PTC's are highly successful in keeping the number of broken appointments at a minimum.

Case monitors took an active part in attempting to reduce the incidence of broken appointments. They tried to prevent them from happening in the first place, and followed up on them when they did occur. As a preventative measure, reminder letters were sent out one week in advance of all screening appointments. And when a child failed to show for an appointment, telephone or mail contact was attempted. A copy of the reminder letter sent to "no-shows" is presented in Appendix D. Because of this extra effort put forth by the monitors, the broken appointment rate was expected to be lower in the monitor PTC's than at Melrose. The results of the ANOVA performed on the data are shown in Table 3-6b. The hypothesis was not

supported.

Individual Components

An examination of individual screening components better enabled us to identify the causes of incomplete screens. Screens were considered incomplete if not started and completed within a single phase, or if missing any components. A frequency distribution of missed components is presented in Tables 3-7a through 3-7d. Missed component rates for each component were obtained by dividing the number of times a component was missed by the total number of times it was due on those screens that were initiated.

$$\text{Missed Component Rate} = \frac{\text{Number of times component missed}}{\text{Number of times component due on initiated screens}}$$

Without exception, history and physical examination components were missed less often than immunizations, laboratory tests, and hearing and vision tests. One explanation of this is connected with scheduling. The former components were due regularly on every screen, while the latter ones were due intermittently and sporadically. The relatively irregular scheduling of immunizations, lab, and hearing and vision tests led to instances of components being given when not due, and

45<

missed when due. Another explanation of the missed component rate difference centers around the heavier reliance upon supplies and apparatus in administering immunizations, lab, and hearing and vision screenings. Supply depletions and equipment malfunction did occur from time to time, which in turn impacted more heavily upon immunizations, etc.

In attempting to account for the causes of missed components, two separate categories of them were established. The first contained all instances where an effort was made to test the child, but the staff was somehow unable to carry out the test. Examples of this included equipment malfunction, supply shortages, lack of cooperation on the part of the child, or any other legitimate reason for omitting a procedure. the second category was comprised of all cases where no explanation for the omission was supplied. A breakdown of missed components by these two categories is shown in Table 3-7e. For the majority of all missed components (60%), no explanation was given. Where there was no explanation, carelessness on the part of the CHS staff or case monitor cannot be ruled out. Nevertheless, since the overall missed component rate was so low (3.9%), the amount of any such carelessness was decidedly minimal.

Frequency distributions of (a) children receiving a due component at least once, and (b) children receiving a

component on all initiated screens on which it was due were obtained (see Tables 3-8a through 3-9d). These data reflect the same trend as was found for missed components. History and physical examination components were received more dependably than immunizations, laboratory tests, and hearing and vision tests. The explanations for this difference are again the same -- irregular scheduling and greater dependency on supplies and equipment in the latter components.

Outcomes of Screens

Abnormalities per screen. Outcomes of screening procedures were categorized as normal or abnormal in accordance with the New York City Department of Health Guidelines for EPSDT (see Appendix A). The rate of abnormalities per screen was gotten by dividing the number of abnormalities by the number of screens.

$$\text{Rate of Abnormalities Per Screen} = \frac{\text{Number of abnormalities}}{\text{Number of screens}}$$

A total of 1443 screens were given during the project, in which 667 abnormalities were found. Thus, the rate of abnormalities per screen was .46. Slightly less than one abnormality was

found for every two screens. A frequency distribution of abnormalities per screen is shown in Table 3-10a. 68 percent of all screens had no abnormalities and 32 percent had one or more.

Abnormalities per component. The rate of abnormalities per screening component was obtained by dividing the number of abnormal outcomes for a screening component by the number of times it was given.

$$\text{Rate of Abnormalities Per Component} = \frac{\text{Number of abnormal outcomes for component}}{\text{Number of times component given}}$$

The results for each component are shown in Table 3-11. The components yielding the highest rates were nose (10.8%), mouth and throat (7.3%), cardio-pulmonary (5.1%), condition of skin (6.1%), and anemia--hemoglobin and hematocrit (9.1%).

Abnormalities on initial screens and rescreens. The first screen received by a child during the study was defined as his initial screen. All further screens received by a child were defined as rescreens or subsequent screens. It is important to note here that an initial screen is not necessarily the first screen a child has ever had at the PTC. An initial screen is simply the first screen a child has had since the beginning of the project. Of the 1443 screens given, 880 (or 61 percent)

were initial and 564 (or 39 percent) were rescreens. 377 and 290 abnormalities were detected on each respectively. The rates of abnormalities for both were obtained as follows:

$$\text{Rate of abnormalities per initial screen} = \frac{\text{Number of abnormalities on initial screens}}{\text{Number of initial screens}}$$

$$\text{Rate of abnormalities per rescreen} = \frac{\text{Number of abnormalities on rescreen}}{\text{Number of rescreens}}$$

The abnormality rate for initial screens was 42.8 percent and for rescreens, 51.5 percent. A distribution of abnormalities on each component by whether they occurred on initiated or rescreen is shown in Tables 3-12a through 3-12d.

Previous status of abnormalities. Abnormalities were categorized as old or new by the examining clinician. Old abnormalities were those uncovered in previous screenings or already known to the parent, and new abnormalities were recent and/or previously unknown. A frequency distribution of old and new abnormalities on each component by whether they were old or new is presented in Tables 3-13a-d. Notice that the percentage of new abnormalities far exceeded the percentage of old by an 80 to 20 margin. The explanation of this is that the most common categories of abnormalities were acute and self-limiting conditions

and are therefore most likely to be new. It supports the contention that EPSDT-CHAP screens are highly comprehensive.

It was thought that a good number of new diseases and abnormalities found on initial screens might be of long-term duration. Thus, they would re-appear as old abnormalities on subsequent screens. For this reason, it was hypothesized that rate of new abnormalities would be higher on initial than on rescreens. Both rates were calculated by dividing the number of new abnormalities by the number of all abnormalities.

$$\text{Rate of new abnormalities on initial screens} = \frac{\text{Number of new abnormalities on initial screens}}{\text{Number of all abnormalities on initial screens}}$$

$$\text{Rate of new abnormalities on rescreens} = \frac{\text{Number of new abnormalities on rescreens}}{\text{Number of all abnormalities on rescreens}}$$

Three hundred twenty (320) of the 377 abnormalities found on initial screens were new, and 214 of the 290 abnormalities on rescreens were new. As seen in Tables 3-14a-d, the rates for each were 84.9 and 73.8 percent, respectively. To determine the likelihood of a difference this large occurring by chance, a chi square test was performed on the data. The difference between abnormality rates was found to be significant. This provides support for the hypothesis that rate of new

abnormalities is higher on initial than on rescreens.

Abnormal findings requiring treatment rate per screen. This rate was derived by dividing the number of referred abnormalities by the number of screens.

$$\text{Abnormal findings requiring treatment rate per screen} = \frac{\text{Number of abnormal findings requiring treatment}}{\text{Number of screens}}$$

A frequency distribution of abnormal findings requiring treatment rate per screen by screening components and age is shown in Table 3-15a through 3-15d.

Abnormal findings requiring treatment rate per abnormality. This rate was derived by dividing the number of abnormalities requiring treatment by the number of all abnormalities.

$$\text{Abnormal findings requiring treatment rate per screen} = \frac{\text{Number of abnormal findings requiring treatment}}{\text{Number of abnormalities}}$$

A frequency distribution of abnormal findings requiring treatment rate per abnormality by screening components and age is shown in Tables 3-16a through 3-16d.

Problems Requiring Treatment and their Outcomes

Problems. A problem was defined as any abnormality or group of abnormalities that required further diagnosis and/or treatment. According to the Children's Defense Fund, "Nationally in fiscal year 1976, for every three screens, two conditions were found needing follow-up care."[6] The rate of problems per screen in the present study was .20.

$$\text{Rate of problems per screen} = \frac{\text{Number of problems}}{\text{Number of screens}}$$

We were interested in the rates of confirmed vs. unconfirmed screening results. All unconfirmed problems were necessarily of the false positive type; that is, what was screened as a problem was found either not to be a problem at all on further examination or diagnosis procedure (e.g., a positive tine test is followed up by the more definitive PPD test) or a problem of another type. Confirmation rates for problem existence and type are shown in Tables 3-17 and 3-18. Overall, 98.6% of all problems identified were confirmed. Of the confirmed problems, 99% of the diagnoses were also confirmed. Both of these rates are so high that differences among clinics are not to be expected.

$$\text{Confirmation rate for existence} = \frac{\text{Number of problems confirmed as existing}}{\text{Number of problems}}$$

$$\text{Confirmation rate for type} = \frac{\text{Number of problems confirmed as the same type}}{\text{Number of problems}}$$

For the remaining analyses in this section, all cases where the existence of a health problem was disconfirmed were not included.

A breakdown of problems by acute-chronic, symptomatic-asymptomatic, and mild-moderate-severe is shown in Tables 3-19 through 3-21. Most problems uncovered during CHAP screens were acute (88.4%) and symptomatic (73%).

We identified whether a problem was previously known or previously unknown to the child's caretaker. and whether it was under care or not under care. In a recent study, it was found that between 60 and 80 percent of problems needing follow-up care were previously unidentified or uncared for.[6] The unique contribution of a screen is higher when a previously unknown problem is uncovered and/or when care is initiated for a problem formerly not under care. A breakdown of problems by known-unknown and under care-not under care is shown in Table 3-22.

Outcomes. Problem resolution data revealed the extent

to which abnormalities requiring treatment were resolved.

A problem was considered resolved if any of the following conditions were met:

1. Condition minor: Treatment completed in one visit.
2. Condition presumed cured or inactive within ten days of initial treatment.
3. Condition noted, but treatment not advisable or warranted.
4. Treatment plan completed, with child cured or the problem inactive.
5. Treatment terminated with maximum benefit achieved.

It was considered unresolved if:

1. Child still under treatment.
2. Condition noted but not treated because treatment not authorized in the jurisdiction.
3. Condition noted but not treated, because treatment not locally available.
4. Family declined further participation:
    - (a) Failure on third appointment for first visit.
    - (b) Failure on third appointment for extended treatment.
5. Family moved from jurisdiction.

Problem resolution rates are shown in Table 3-23.

$$\text{Problem resolution rate} = \frac{\text{Number of resolved problems}}{\text{Number of problems}}$$

It can seen that Melrose, the control clinic, tended to resolve a greater number of problems than either monitor clinic (86.8% vs 61.5% vs 60.0%).

Table 3-24 reflects the reason for problem resolution. It is obvious from examination of this table that there were differences between the clinics in their reasons given for problem resolution. While the cause of this is unclear, since the problems in the clinics do not appear to differ in either their severity or type (chronic/acute). It may simply be different operational definitions of the three reasons for resolution between the clinics, or doctors, an issue which this study was not designed to address.

Summary

The case monitoring section of this study was an effort to introduce into the Pediatric Treatment Clinics an additional staff member whose responsibilty it was to "track" children through the CHAP screening process. It was believed that the monitoring activities of this individual would result in increased rates of initiated and completed screens. It was also hypothesized that the time interval and number of visits required for completing a screen would be reduced through the presence of the monitor. Only one of these hypotheses was partially supported. On the screening initiation measure, a case monitor clinic had a significantly higher rate of initiated screens than the control clinic, but the other did not. The data for screening completion revealed a higher completion rate for the control clinic than for both monitor clinics. There were no significant differences among clinics on the time interval and number of visits measures.

For problems requiring treatment, it was also expected that the case monitor would have a positive impact. But the results show that Melrose -- the control clinic, resolved a greater number of problems than the monitor clinics.

There are a number of explanations for the apparently poor showing of the case monitors evidenced in this study. Pediatric Treatment Clinics in New York City are known to

vary quite a bit. Since no baseline or pre-project data was gathered at Melrose, Mitchell and Tinton, their relative efficiency prior to the project period remains unknown. The possibility exists that Melrose began at a much higher level of functioning and managed to maintain that edge despite the addition of the case monitors. This might explain why Melrose was ahead on more measures than expected.

Another explanation centers around the possibility of between clinic differences in the interpretation and treatment of project form items. Perhaps the very presence of case monitors at Mitchell and Tinton resulted in the imposition of more stringent standards by the staff in filling out the project forms. This in turn would have resulted in lower screening completion rates, problem resolution rates, and the like.

Nonetheless, because of the complexity and inconsistency of these results, further study in this area is called for.

57<

Notes to the Text

1. Office of Child Health Affairs, HEW, "A Proposal for New Federal Leadership in Maternal and Child Health Care in the United States," Washington, D.C. In draft, November, 1976, pp. 9-10, 15.
2. Office of the Assistant Secretary for Program Coordination, HEW Maternal and Child Health Care Programs, Washington, D.C., October, 1966.
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Table 3-1a: Distribution of Children by # of Phases Due

# of Phases Due					
1	2	3	4	5	6
(403) 45.8%	(163) 18.5%	(158) 17.9%	(88) 10%	(56) 6.4%	(12) 1.4%

Table 3-1b: Distribution of Children by Number of Phases Due Within Each PTC

	Melrose	Tinton	Mitchell	Total
1	(225) 53.8%	(65) 35.3%	(113) 40.6%	(403) 45.8%
2	(84) 20.1%	(40) 21.7%	(39) 14.0%	(163) 18.5%
3	(66) 15.8%	(37) 20.1%	(55) 19.8%	(158) 17.9%
4	(24) 5.8%	(27) 14.7%	(37) 13.3%	(88) 10.0%
5	(16) 3.8%	(14) 7.6%	(26) 9.4%	(56) 6.4%
6	(3) 0.7%	(1) 0.6%	(8) 2.9%	(12) 1.4%
Total	(418) 100.0%	(184) 100.0%	(278) 100.0%	(880) 100.0%

Table 3-2a: Rate of Initiation for Overall Sample

# of Phases Due	# of Phases Initiated 1	2	3	4	5	6	Total
1	(371) 92.1%	(32) 7.9%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(403) 100.0%
2	(89) 54.6%	(67) 41.1%	(6) 3.7%	(1) 0.6%	(0) 0.0%	(0) 0.0%	(163) 100.0%
3	(56) 35.4%	(45) 28.5%	(48) 30.4%	(9) 5.7%	(0) 0.0%	(0) 0.0%	(158) 100.0%
4	(27) 30.7%	(16) 18.2%	(23) 26.1%	(17) 19.3%	(4) 4.6%	(1) 1.1%	(88) 100.0%
5	(14) 25.0%	(9) 16.1%	(9) 16.1%	(15) 26.8%	(7) 12.5%	(2) 3.5%	(56) 100.0%
6	(2) 16.8%	(1) 8.3%	(1) 8.3%	(1) 8.3%	(6) 50.0%	(1) 8.3%	(12) 100.0%
Total	(559) 63.5%	(170) 19.3%	(87) 9.9%	(43) 4.9%	(17) 1.9%	(4) 0.5%	(880) 100.0%

Table 3-2b: Rate of Initiation for

Melrose

# of Phases Due	# of Phases Initiated						
	1	2	3	4	5	6	Total
1	(210) 93.3%	(15) 6.7%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(225) 100.0%
2	(47) 55.9%	(34) 40.5%	(3) 3.6%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(84) 100.0%
3	(25) 37.9%	(17) 25.7%	(20) 30.3%	(4) 6.1%	(0) 0.0%	(0) 0.0%	(66) 100.0%
4	(10) 41.7%	(7) 29.1%	(3) 12.5%	(4) 16.7%	(0) 0.0%	(0) 0.0%	(24) 100.0%
5	(8) 50.0%	(3) 18.8%	(0) 0.0%	(3) 18.8%	(2) 12.5%	(0) 0.0%	(16) 100.0%
6	(1) 33.3%	(1) 33.3%	(0) 0.0%	(0) 0.0%	(1) 33.3%	(0) 0.0%	(3) 100.0%
Total	(301) 72.0%	(77) 18.4%	(26) 6.2%	(11) 2.7%	(3) 0.7%	(0) 0.0%	(418) 100.0%

Table 3-2c: Rate of Initiation for

Tinton

# of Phases Due	# of Phases Initiated						
	1	2	3	4	5	6	Total
1	(61) 93.8%	(4) 6.2%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(65) 100.0%
2	(33) 82.5%	(6) 15.0%	(1) 2.5%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(40) 100.0%
3	(21) 56.8%	(13) 35.1%	(2) 5.4%	(1) 2.7%	(0) 0.0%	(0) 0.0%	(37) 100.0%
4	(13) 48.2%	(5) 18.5%	(5) 18.5%	(3) 11.1%	(1) 3.7%	(0) 0.0%	(27) 100.0%
5	(5) 35.7%	(3) 21.4%	(4) 28.6%	(1) 7.1%	(1) 7.1%	(0) 0.0%	(14) 100.0%
6	(0) 0.0%	(0) 0.0%	(1) 100.0%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(1) 100.0%
Total	(133) 72.3%	(31) 16.8%	(13) 7.1%	(5) 2.7%	(2) 1.1%	(0) 0.0%	(184) 100.0%

Table 3-2d: Rate of Initiation for

Mitchell

# of Phases Due	# of Phases Initiated						
	1	2	3	4	5	6	Total
1	(100) 88.5%	(13) 11.5%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(113) 100.0%
2	(9) 23.1%	(27) 69.2%	(2) 5.1%	(1) 2.6%	(0) 0.0%	(0) 0.0%	(39) 100.0%
3	(10) 18.2%	(15) 27.3%	(26) 27.3%	(4) 27.3%	(0) 0.0%	(0) 0.0%	(55) 100.0%
4	(4) 10.8%	(4) 10.8%	(15) 40.6%	(10) 27.0%	(3) 8.1%	(1) 2.7%	(37) 100.0%
5	(1) 3.9%	(3) 11.5%	(5) 19.2%	(11) 42.3%	(4) 15.4%	(2) 7.7%	(26) 100.0%
6	(1) 12.5%	(0) 0.0%	(0) 0.0%	(1) 12.5%	(5) 62.5%	(1) 12.5%	(8) 100.0%
Total	(125) 45.0%	(62) 22.3%	(48) 17.3%	(27) 9.7%	(12) 4.3%	(4) 1.4%	(278) 100.0%

Table 3-2 e: Analysis of Variance of the Ratio of Initiated Screens to Due Screens

Source	df	MS	F
Between Groups	2	2.809	23.646
Within Groups	877	.119	

	Mitchell	Tinton	Melrose
Mean Rate of Initiation	.943	.721	.880
N	278	184	418

Table 3-3a: Rate of Completion for Overall Sample

# of Phases Due	# of Screens Completed							
	0	1	2	3	4	5	6	Total
1	(225) 55.8%	(172) 42.7%	(6) 1.5%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(403) 100.0%
2	(40) 24.5%	(90) 55.2%	(32) 19.6%	(1) 0.6%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(163) 100.0%
3	(37) 23.4%	(57) 36.1%	(36) 22.8%	(25) 15.8%	(3) 1.9%	(0) 0.0%	(0) 0.0%	(158) 100.0%
4	(21) 23.9%	(28) 31.8%	(23) 26.1%	(10) 11.4%	(5) 5.7%	(1) 1.1%	(0) 0.0%	(88) 100.0%
5	(9) 16.1%	(27) 48.2%	(9) 16.1%	(8) 14.3%	(2) 3.6%	(1) 1.8%	(0) 0.0%	(56) 100.0%
6	(2) 16.7%	(5) 41.7%	(2) 16.7%	(3) 25.0%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(12) 100.0%
Total	(334) 38.0%	(379) 43.1%	(108) 12.3%	(47) 5.3%	(10) 1.1%	(2) .21%	(0) 0.0%	(880) 100.0%

Table 3-3b: Rate of Completion for

Melrose

# of Phases Due	# of Screens Completed 0	1	2	3	4	5	6	Total
1	(112) 49.8%	(112) 49.8%	(1) 0.4%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(225) 100.0%
2	(13) 15.5%	(54) 64.3%	(16) 19.0%	(1) 1.2%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(84) 100.0%
3	(8) 12.1%	(28) 42.4%	(15) 22.7%	(14) 21.2%	(1) 1.5%	(0) 0.0%	(0) 0.0%	(66) 100.0%
4	(3) 12.5%	(11) 45.8%	(6) 25.0%	(4) 16.7%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(24) 100.0%
5	(1) 6.2%	(9) 56.3%	(2) 12.5%	(1) 6.2%	(2) 12.5%	(1) 6.2%	(0) 0.0%	(16) 100.0%
6	(0) 0.0%	(1) 33.3%	(1) 33.3%	(1) 33.3%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(3) 100.0%
Total	(137) 32.8%	(215) 51.4%	(41) 9.8%	(21) 5.0%	(3) 0.7%	(1) 0.2%	(0) 0.0%	(418) 100.0%

Table 3-3c: Rate of Completion for

Tinton

	# of Screens Completed							
# of Phases Due	0	1	2	3	4	5	6	Total
1	(35) 53.8%	(28) 43.1%	(2) 3.1%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(65) 100.0%
2	(20) 50.0%	(18) 45.0%	(2) 5.0%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(40) 100.0%
3	(18) 48.7%	(14) 37.8%	(5) 13.5%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(37) 100.0%
4	(11) 40.7%	(9) 33.3%	(6) 22.2%	(0) 0.0%	(1) 3.7%	(0) 0.0%	(0) 0.0%	(27) 100.0%
5	(4) 28.6%	(9) 64.3%	(0) 0.0%	(1) 7.1%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(14) 100.0%
6	(1) 100.0%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(1) 100.0%
Total	(89) 48.4%	(78) 42.4%	(15) 8.2%	(1) 0.5%	(1) 0.5%	(0) 0.0%	(0) 0.0%	(184) 100.0%

Table 3-3d: Rate of Completion for

Mitchell

	# of Screens Completed							
# of Phases Due	0	1	2	3	4	5	6	Total
1	(78) 69.0%	(32) 28.3%	(3) 2.7%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(113) 100.0%
2	(7) 17.9%	(18) 46.2%	(14) 35.9%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(39) 100.0%
3	(11) 20.0%	(15) 27.3%	(16) 29.1%	(11) 20.0%	(2) 3.6%	(0) 0.0%	(0) 0.0%	(55) 100.0%
4	(7) 18.9%	(8) 21.6%	(11) 29.7%	(6) 16.2%	(4) 10.8%	(1) 2.7%	(0) 0.0%	(37) 100.0%
5	(4) 15.4%	(9) 34.6%	(7) 26.9%	(6) 23.1%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(26) 100.0%
6	(1) 12.5%	(4) 50.0%	(1) 12.5%	(2) 25.0%	(0) 0.0%	(0) 0.0%	(0) 0.0%	(8) 100.0%
Total	(108) 38.8%	(86) 30.9%	(52) 18.7%	(25) 9.0%	(6) 2.2%	(1) 0.4%	(0) 0.0%	(278) 100.0%

Table 3-3e: Analysis of Variance of the Ratio of Completed Screens to Due Screens

Source	df	MS	F
Between Groups	2	2.006	10.965
Within Groups	877	.183	

	Mitchell	Tinton	Melrose
Mean Rate of Completion	.424	.324	.499
N	278	184	418

Table 3-4a: Visits Required To Conduct Screens

Number of Visits	Total			Melrose			Tinton			Mitchell		
	Frequency	Percentage	Cumulative	Freq.	%	Cum.	Freq.	%	Cum.	Freg.	%	Cum.
1	1200	83.16	83.16	509	85.98	85.98	223	84.47	84.47	468	79.73	79.73
2	203	14.07	97.23	69	11.66	97.64	33	12.50	96.97	101	17.21	96.93
3 or more	40	2.77	100.00	14	2.36	100.00	8	3.03	100.00	18	3.07	100.00
Total	1443	100.00	100.00	592	100.00	100.00	264	100.00	100.00	587	100.00	100.00

Table 3-4b: Number of Visits Required For Completed Screens

	Total			Melrose			Tinton			Mitchell		
Number of Visits	Frequency	Percentage	Cumulative	Freq.	%	Cum.	Freq.	%	Cum.	Freq	%	Cum.
1	623	90.42	90.42	303	89.12	89.12	87	92.55	92.55	233	91.37	91.37
2	56	8.13	98.55	31	9.12	98.24	5	5.32	97.87	20	7.84	99.22
3 or more	10	1.45	100.0	6	1.76	100.0	2	2.13	100.0	2	0.78	100.0
Total	689	100.0	100.0	340	100.0	100.0	94	100.0	100.0	255	100.0	100.0

Table 3-4c:

Analysis of Variance of Number of Visits Required for Initiated Screens

Source	df	MS	F
Between groups	2	0.647	2.579
Within groups	1441	0.251	

	Mitchell	Tinton	Melrose
Mean Number of Visits	1.221	1.178	1.155
N*	588	264	592

* N represents the number of initiated screens recorded in each CHS.

Table 3-4d:

Analysis of Variance of Number of Visits Required for Completed Screens

Source	df	MS	F
Between groups	2	0.028	< 1
Within groups	673	0.135	

	Mitchell	Tinton	Melrose
Mean Number of Visits	1.113	1.096	1.123
N*	248	94	334

* N represents the number of completed screens recorded in each CHS.

Table 3-5a: Time Interval Required To Conduct Screens

Number of Days	Total			Melrose			Tinton			Mitchell		
	Frequency	Percentage	Cumulative	Freq.	%	Cum.	Freq.	%	Cum.	Freq.	%	Cum.
Same Day	8.75	60.64	60.64	370	62.50	62.50	134	50.76	50.76	371	63.20	63.2
1 to 7	78	5.40	66.04	27	4.56	67.06	33	12.5	63.26	18	3.07	66.2
8 to 14	60	4.16	70.20	25	4.22	71.28	17	6.44	69.70	18	3.07	69.3
15 to 21	61	4.23	74.43	25	4.22	75.51	21	7.95	77.65	15	2.56	71.8
22 to 30	67	4.64	79.07	32	5.41	80.91	7	2.65	80.30	28	4.77	76.6
Over 30	302	20.93	100.00	113	19.09	100.00	52	19.70	100.00	137	23.34	100.0
Total	1443	100.00	100.00	592	100.00	100.00	264	100.00	100.00	587	100.00	100.0

Table 3-5b:

Analysis of Variance of
Time Interval Required for Initiated Screens

Source	df	MS	F
Between groups	2	1390.578	< 1
Within groups	1441	1969.836	

	Mitchell	Tinton	Melrose
Mean Number of Days	20.301	23.205	19.313
N*	588	264	592

* N represents the number of initiated screens recorded in each CHS.

Table 3-5b: Time Interval Required For Completed Screens

Number of Days	Total			Melrose			Tinton			Mitchell		
	Frequency	Percentage	Cumulative	Freq.	%	Cum.	Freq.	%	Cum.	Freq	%	Cum.
Same Day	526	76.34	76.34	258	75.88	75.88	59	62.77	62.77	209	81.96	81.96
1 to 7	42	6.10	82.44	17	5.00	80.88	14	14.89	77.66	11	4.31	86.27
8 to 14	33	4.79	87.23	20	5.88	86.76	6	6.38	84.04	7	2.75	89.02
15 to 21	26	3.77	91.00	12	3.53	90.29	6	6.38	90.43	8	3.14	92.16
22 to 30	20	2.90	93.90	12	3.53	93.82	2	2.13	92.55	6	2.35	94.51
Over 30	42	6.10	100.0	21	6.18	100.0	7	7.45	100.0	14	5.49	100.0
Total	689	100.0	100.0	340	100.0	100.0	94	100.0	100.0	255	100.0	100.0

Table 3-5c:

Analysis of Variance of
Time Interval Required for Completed Screens

Source	df	MS	F
Between groups	2	961.641	2.191
Within groups	673	438.821	

	Mitchell	Tinton	Melrose
Mean Number of Days	4.802	10.085	6.603
N*	248	94	334

* N represents the number of completed screens recorded in each CHS.

Table 3-6a: Broken Appointments

Number of Broken Appointments	Total			Melrose			Tinton			Mitchell		
	Frequency	Percentage	Cumulative	Freq.	%	Cum.	Freq.	%	Cum.	Freq.	%	Cum.
None	1321	91.55	91.55	565	95.44	95.44	254	96.21	96.21	502	85.52	85.5
1	59	4.09	95.63	14	2.36	97.80	2	.76	96.97	43	7.33	92.8
2	31	2.15	97.78	4	.68	98.48	6	2.27	99.24	21	3.58	96.4
3 or more	32	2.22	100.00	9	1.52	100.00	2	.76	100.00	21	3.58	100.0
Total	1443	100.00	100.00	592	100.00	100.00	264	100.00	100.00	587	100.00	100.0

Table 3-6b:

Analysis of Variance of Broken Appointments

Source	df	MS	F
Between groups	2	5.185	12.350 ***
Within groups	1441	0.420	

*** $p < .05$

	Mitchell	Tinton	Melrose
Mean number of broken appointmens per screen	0.267	0.076	0.105
N*	588	264	592

*N represents the number of initiated screens recorded in each CHS.

Table 3-6c: Broken Appointments For Completed Screens

Number of Broken Appointments	Total			Melrose			Tinton			Mitchell		
	Frequency	Percentage	Cumulative	Freq.	%	Cum.	Freq	%	Cum.	Freq.	%	Cum.
None	668	96.95	96.95	334	98.24	98.24	91	96.81	96.81	243	95.29	95.29
1	12	1.74	98.69	3	0.88	99.12	0	0.0	96.81	9	3.53	98.82
2	8	1.16	99.85	2	0.59	99.71	3	3.19	100.0	3	1.18	100.0
3 or more	1	0.15	100.0	1	0.29	100.0	0	0.0	100.0	0	0.0	100.0
Total	689	100.0	100.0	340	100.0	100.0	94	100.0	100.0	255	100.0	100.0

Table 3-7a: Missed Components[1]

Screening Component	Number of Times Component Due	Component Missed #	%
1. History Growth & Development.	1443	1	0.1
2. Physical Examination			
a. Eye	1443	4	0.3
b. Ear	1443	3	0.2
c. Nose	1443	2	0.1
d. Mouth and Throat	1443	3	0.2
e. Dental	1443	4	0.3
f. Head and Neck	1443	4	0.3
g. Cardio-Pulmonary	1443	4	0.3
h. Abdomen	1443	4	0.3
i. Genito-urinary	1443	4	0.3
j. Musculo-skeletal	1443	6	0.4
k. Neurological	1443	7	0.5
l. Condition of Skin	1443	9	0.6
m. Other (Specify)			
3. Immunizations			
D.P.T.	623	67	10.8
Polio	623	186	29.9
Measles	92	19	20.7
Rubella	92	19	20.7
Mumps	92	19	20.7
4. a. Anemia (Hemogobin & Hematocrit)	398	88	22.1
b. Tuberculin Test	459	136	29.6
c. Sickle Cell Anemia (Hb-Electro-phoresis)	91	32	35.2
d. Lead Test	148	24	16.2
e. Urinalysis	277	87	31.4
5. Speech			
6. Vision			
Snellen (Distance)	277	126	45.5
Stereopsis	277	121	43.7
Near Vision	68	30	44.1
7. Hearing (Audio Screening)	277	116	41.9

[1] Cell entries are numbers and percentages of children.

Table 3-7b: Missed Components[1]

Melrose

Screening Components	Number of Times Component Due	Component Missed #	Component Missed %
1. History Growth & Development	592	0	0.0
2. Physical Examination			
a. Eye	592	0	0.0
b. Ear	592	0	0.0
c. Nose	592	0	0.0
d. Mouth and Throat	592	0	0.0
e. Dental	592	1	0.2
f. Head and Neck	592	1	0.2
g. Cardio-Pulmonary	592	1	0.2
h. Abdomen	592	1	0.2
i. Genito-urinary	592	1	0.2
j. Musculo-skeletal	592	1	0.2
k. Neurological	592	2	0.3
l. Condition of Skin	592	2	0.3
m. Other (Specify)			
3. Immunizations			
D.P.T.	239	18	7.5
Polio	239	35	14.6
Measles	41	7	17.1
Rubella	41	7	17.1
Mumps	41	7	17.1
4. a. Anemia (Hemoglobin & Hematocrit)	170	40	23.5
b. Tuberculin Test	205	62	30.2
c. Sickle Cell Anemia (Hb-Electro-phoresis)	41	10	24.4
d. Lead Test	70	12	17.1
e. Urinalysis	131	46	35.1
5. Speech	—	—	
6. Vision			
Snellen (Distance)	131	63	48.1
Stereopsis	131	61	46.6
Near Vision	28	14	50.0
7. Hearing (Audio Screening)	131	62	47.3

Table 3-7c: Missed Components[1]

Tinton

Screening Components	Number of Times Component Due	Component Missed #	%
1. History Growth & Development	264	0	0.0
2. Physical Examination			
a. Eye	264	1	0.4
b. Ear	264	1	0.4
c. Nose	264	0	0.0
d. Mouth and Throat	264	1	0.4
e. Dental	264	0	0.0
f. Head and Neck	264	1	0.4
g. Cardio-Pulmonary	264	1	0.4
h. Abdomen	264	1	0.4
i. Genito-urinary	264	1	0.4
j. Musculo-skeletal	264	3	1.1
k. Neurological	264	1	0.4
l. Condition of Skin	264	4	1.5
m. Other (Specify)			
3. Immunizations			
D.P.T.	113	27	23.9
Polio	113	37	32.7
Measles	20	8	40.0
Rubella	20	8	40.0
Mumps	20	7	35.0
4. a. Anemia (Hemoglobin & Hematocrit)	69	16	23.2
b. Tuberculin Test	83	18	21.7
c. Sickle Cell Anemia (Hb-Electro-phoresis)	20	10	50.0
d. Lead Test	33	8	24.2
e. Urinalysis	48	9	18.8
5. Speech	—	--	
6. Vision			
Snellen (Distance)	48	14	29.2
Stereopsis	48	13	27.1
Near Vision	28	2	7.1
7. Hearing (Audio Screening)	48	14	29.2

Table 3-7d: Missed Components[1]

Mitchell

Screening Components	Number of Times Component Due	Component Missed	
		#	%
1. History Growth & Development	586	1	0.2
2. Physical Examination			
a. Eye	586	3	0.5
b. Ear	586	2	0.2
c. Nose	586	2	0.2
d. Mouth and Throat	586	2	0.2
e. Dental	586	3	0.5
f. Head and Neck	586	2	0.2
g. Cardio-Pulmonary	586	2	0.2
h. Abdomen	586	2	0.2
i. Genito-urinary	586	2	0.2
j. Musculo-skeletal	586	2	0.2
k. Neurological	586	4	0.7
l. Condition of Skin	586	3	0.5
m. Other (Specify)			
3. Immunizations			
D.P.T.	271	22	8.1
Polio	271	114	42.1
Measles	31	4	12.9
Rubella	31	4	12.9
Mumps	31	5	16.1
4. a. Anemia (Hemoglobin & Hematocrit)	159	32	20.1
b. Tuberculin Test	167	54	32.3
c. Sickle Cell Anemia (Hb-Electro-phoresis)	31	13	41.9
d. Lead Test	46	5	10.9
e. Urinalysis	97	32	33.0
5. Speech	—	—	
6. Vision			
Snellen (Distance)	97	49	50.5
Stereopsis	97	47	48.5
Near Vision	29	14	48.3
7. Hearing (Audio Screening)	97	40	41.2

Table 3-7e: Explanations of Missed Components

Screening Components	Number of Times Missed	Reason Given		Reason Not Given	
		#	%	#	%
1. History Growth & Development.	1	0	0.0	1	100.0
2. Physical Examination					
a. Eye	4	1	25.0	3	75.0
b. Ear	3	1	33.3	2	66.7
c. Nose	2	1	50.0	1	50.0
d. Mouth and Throat	3	1	33.3	2	66.7
e. Dental	4	1	25.0	3	75.0
f. Head and Neck	4	1	25.0	3	75.0
g. Cardio-Pulmonary	4	1	25.0	3	75.0
h. Abdomen	4	1	25.0	3	75.0
i. Genito-urinary	4	1	25.0	3	75.0
j. Musculo-skeletal	6	1	16.7	5	83.3
k. Neurological	7	1	14.3	6	85.7
l. Condition of Skin	9	1	11.1	8	88.9
3. a. Anemia (Hemoglobin & Hematocrit)	88	10	11.4	78	88.6
b. Tuberculin Test	136	67	49.3	69	50.7
c. Sickle Cell Anemia (Hb-Electro-phoresis)	32	1	3.1	31	96.9
d. Lead Test	24	5	20.8	19	79.2
e. Urinalysis	87	28	32.2	59	67.8
4. Speech					
Vision					
Snellen (Distance	126	63	50.0	63	50.0
Stereopsis	121	64	52.9	57	47.1
Near Vision	30	15	50.0	15	50.0
5. Hearing (Audio Screening)	116	61	52.6	55	47.4

Table 3-8a: Frequency Distribution of Children Receiving a Due Component of Least Once[1]

Screening Components	Component Due At Least Once	Component Received at Least Once	
		#	%
1. History Growth & Development.	881	881	100.0
2. Physical Examination			
a. Eye	881	880	99.9
b. Ear	881	880	99.9
c. Nose	881	880	99.9
d. Mouth and Throat	881	880	99.9
e. Dental	881	879	99.8
f. Head and Neck	881	879	99.8
g. Cardio-Pulmonary	881	879	99.8
h. Abdomen	881	879	99.8
i. Genito-urinary	881	879	99.8
j. Musculo-skeletal	881	877	99.5
k. Neurological	881	879	99.8
l. Condition of Skin	881	878	99.7
m. Other (Specify)			
3. Immunizations			
D.P.T.	459	407	88.7
Polio	459	354	77.1
Measles	83	67	80.7
Rubella	83	67	80.7
Mumps	83	67	80.7
4. a. Anemia (Hemoglobin & Hematocrit)	337	275	81.6
b. Tuberculin Test	417	307	73.6
c. Sickle Cell Anemia (Hb-Electro-phoresis)	82	58	70.7
d. Lead Test	135	118	87.4
e. Urinalysis	252	180	71.4
5. Speech			
6. Vision			
Snellen (Distance)	252	144	94.7
Stereopsis	252	147	58.3
Near Vision	67	38	56.7
7. Hearing (Audio Screening)	252	152	60.3

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[1] Cell entries are numbers and percentages of children.

Table 3-8b: Frequency Distribution of Children Receiving a Due Component of Least Once[1]

Melrose

Screening Components	Component Due At Least Once	Component Received at Least Once	
		#	%
1. History Growth & Development	418	418	100.0
2. Physical Examination			
a. Eye	418	418	100.0
b. Ear	418	418	100.0
c. Nose	418	418	100.0
d. Mouth and Throat	418	418	100.0
e. Dental	418	417	99.8
f. Head and Neck	418	417	99.8
g. Cardio-Pulmonary	418	417	99.8
h. Abdomen	418	417	99.8
i. Genito-urinary	418	417	99.8
j. Musculo-skeletal	418	417	99.8
k. Neurological	418	417	99.8
l. Condition of Skin	418	417	99.8
3. Immunizations			
D.P.T.	196	178	90.8
Polio	196	170	86.7
Measles	37	31	83.8
Rubella	37	31	83.8
Mumps	37	31	83.8
4. a. Anemia (Hemoglobin & Hematocrit)	150	120	80.0
b. Tuberculin Test	189	139	73.5
c. Sickle Cell Anemia (Hb-Electro-phoresis)	37	30	81.1
d. Lead Test	65	55	84.6
e. Urinalysis	119	80	67.2
5. Speech			
6. Vision			
Snellen (Distance)	119	65	54.6
Stereopsis	119	66	55.5
Near Vision	28	14	50.0
7. Hearing (Audio Screening)	119	65	54.6

Table 3-8c: Frequency Distribution of Children Receiving a Due Component of Least Once[1]

Tinton

Screening Components	Component Due At Least Once	Component Received at Least Once	
		#	%
1. History Growth & Development	184	184	100.0
2. Physical Examination			
a. Eye	184	184	100.0
b. Ear	184	184	100.0
c. Nose	184	184	100.0
d. Mouth and Throat	184	184	100.0
e. Dental	184	184	100.0
f. Head and Neck	184	184	100.0
g. Cardio-Pulmonary	184	184	100.0
h. Abdomen	184	184	100.0
i. Genito-urinary	184	184	100.0
j. Musculo-skeletal	184	182	98.9
k. Neurological	184	184	100.0
l. Condition of Skin	184	183	99.5
3. Immunizations			
D.P.T.	98	78	79.6
Polio	98	71	72.4
Measles	16	10	62.5
Rubella	16	10	62.5
Mumps	16	11	68.8
4. a. Anemia (Hemoglobin & Hematocrit)	58	47	81.0
b. Tuberculin Test	76	62	81.6
c. Sickle Cell Anemia (Hb-Electro-phoresis)	16	10	62.5
d. Lead Test	27	23	85.2
e. Urinalysis	46	38	82.6
5. Speech			
6. Vision			
Snellen (Distance)	46	33	71.7
Stereopsis	46	34	73.9
Near Vision	11	9	81.8
7. Hearing (Audio Screening)	46	33	71.7

Table 3-8d: Frequency Distribution of Children Receiving a Due Component of Least Once[1]

Mitchell

Screening Components	Component Due At Least Once	Component Received at Least Once #	%
1. History Growth & Development	279	279	100.0
2. Physical Examination			
a. Eye	279	278	99.6
b. Ear	279	278	99.6
c. Nose	279	278	99.6
d. Mouth and Throat	279	278	99.6
e. Dental	279	278	99.6
f. Head and Neck	279	278	99.6
g. Cardio-Pulmonary	279	278	99.6
h. Abdomen	279	278	99.6
i. Genito-urinary	279	278	99.6
j. Musculo-skeletal	279	278	99.6
k. Neurological	279	278	99.6
l. Condition of Skin	279	278	99.6
3. Immunizations			
D.P.T.	165	151	91.5
Polio	165	113	68.5
Measles	30	26	86.7
Rubella	30	26	86.7
Mumps	30	25	83.3
4. a. Anemia (Hemoglobin & Hematocrit)	130	108	83.1
b. Tuberculin Test	150	106	70.7
c. Sickle Cell Anemia (Hb-Electro-phoresis)	30	18	60.0
d. Lead Test	44	40	90.9
e. Urinalysis	86	61	70.9
5. Speech			
6. Vision			
Snellen (Distance)	86	45	52.3
Stereopsis	86	46	53.[illegible]
Near Vision	28	15	53.6
7. Hearing (Audio Screening)	86	53	61.6

Table 3-9a: Frequency Distribution of Children Receiving a Due Component the Correct Number of Times[1]

Screening Components	Component Due At Least Once	Component Received Correct Number of Times	
		#	%
1. History Growth & development	881	880	99.9
2. Physical Examination			
a. Eye	881	877	99.6
b. Ear	881	878	99.7
c. Nose	881	879	99.8
d. Mouth and Throat	881	878	99.7
e. Dental	881	877	99.6
f. Head and Neck	881	877	99.6
g. Cardio-Pulmonary	881	877	99.6
h. Abdomen	881	877	99.6
i. Genito-urinary	881	877	99.6
j. Musculo-skeletal	881	875	99.3
k. Neurological	881	874	99.2
l. Condition of Skin	881	872	99.0
3. Immunizations			
D.P.T.	459	395	86.1
Polio	459	304	66.2
Measles	83	67	80.7
Rubella	83	67	80.7
Mumps	83	67	80.7
4. a. Anemia (Hemoglobin & Hematocrit)	337	251	74.5
b. Tuberculin Test	417	284	68.1
c. Sickle Cell Anemia (Hb-Electro-phoresis)	82	51	62.2
d. Lead Test	135	111	82.2
e. Urinalysis	252	170	67.5
5. Speech			
6. Vision			
Snellen (Distance)	252	134	53.2
Stereopsis	252	139	55.2
Near Vision	67	37	55.2
7. Hearing (Audio Screening)	252	143	56.7

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[1] Cell entries are numbers and percentages of children.

Table 3-9b: Frequency Distribution of Children Recieving a Due Component the Correct Number of Times[1]

Melrose

Screening Components	Component Due At Least Once	Component Received Correct Number of Times	
		#	%
1. History Growth & Development	418	418	100.0
2. Physical Examination			
a. Eye	418	418	100.0
b. Ear	418	418	100.0
c. Nose	418	418	100.0
d. Mouth and Throat	418	418	100.0
e. Dental	418	417	99.8
f. Head and Neck	418	417	99.8
g. Cardio-Pulmonary	418	417	99.8
h. Abdomen	418	417	99.8
i. Genito-urinary	418	417	99.8
j. Musculo-skeletal	418	417	99.8
k. Neurological	418	416	99.5
l. Condition of Skin	418	416	99.5
	418	366	87.6
3. Immunizations			
D.P.T.	196	178	90.8
Polio	196	163	83.7
Measels	37	31	83.8
Rubella	37	31	83.8
Mumps	37	31	83.8
4. a. Anemia (Hemoglobin & Hematocrit)	150	110	73.3
b. Tuberculin Test	189	129	73.5
c. Sickle Cell Anemia (Hb-Electro-phoresis)	37	31	73.0
d. Lead Test	65	53	81.5
e. Urinalysis	119	77	64.7
5. Speech			
6. Vision			
Snellen (Distance)	119	60	50.4
Stereopsis	119	62	52.1
Near Vision	28	14	50.0
7. Hearing (Audio Screening)	119	62	52.1

Table 3-9c: Frequency Distribution of Children Recieving a Due Component the Correct Number of Times-

Tinton

Screening Components	Component Due At Least Once	Component Received Correct Number of Times	
		#	%
1. History Growth & Development	184	184	100.0
2. Physical Examination			
a. Eye	184	183	99.5
b. Ear	184	183	99.5
c. Nose	184	184	100.0
d. Mouth and Throat	184	183	99.5
e. Dental	184	184	100.0
f. Head and Neck	184	183	99.5
g. Cardio-Pulmonary	184	183	99.5
h. Abdomen	184	183	99.5
i. Genito-urinary	184	183	99.5
j. Musculo-skeletal	184	181	98.4
k. Neurological	184	183	99.5
l. Condition of Skin	184	180	97.8
	184	116	63.0
3. Immunizations			
D.P.T.	98	74	75.5
Polio	98	64	65.3
Measels	16	10	62.5
Rubella	16	10	62.5
Mumps	16	11	68.8
4. a. Anemia (Hemoglobin & Hematocrit	58	42	72.4
b. Tuberculin Test	76	58	76.3
c. Sickle Cell Anemia (Hb-Electro-phoresis)	16	6	37.5
d. Lead Test	27	19	70.4
e. Urinalysis	46	38	82.6
5. Speech			
6. Vision			
Snellen (Distance)	46	33	71.7
Stereopsis	46	34	73.9
Near Vision	11	9	81.8
7. Hearing (Audio Screening)	46	33	71.7

Table 3-9d: Frequency Distribution of Children Recieving a Due Component the Correct Number of Times[1]

Mitchell

Screening Components	Component Due At Least Once	Component Received Correct Number of Times	
		#	%
1. History Growth & Development	279	278	99.6
2. Physical Examination			
a. Eye	279	276	98.9
b. Ear	279	277	99.3
c. Nose	279	277	99.3
d. Mouth and Throat	279	277	99.3
e. Dental	279	276	98.9
f. Head and Neck	279	277	99.3
g. Cardio-Pulmonary	279	277	99.3
h. Abdomen	279	277	99.3
i. Genito-urinary	279	277	99.3
j. Musculo-skeletal	279	277	99.3
k. Neurological	279	275	98.6
l. Condition of Skin	279	276	98.9
	279	186	66.7
3. Immunizations			
D.P.T.	165	143	86.7
Polio	165	77	46.7
Measels	30	26	86.7
Rubella	30	26	86.7
Mumps	30	25	83.3
4. a. Anemia (Hemoglobin & Hematocrit)	130	100	76.9
b. Tuberculin Test	150	97	64.7
c. Sickle Cell Anemia (Hb-Electro-phoresis)	30	18	60.0
d. Lead Test	44	39	88.6
e. Urinalysis	86	54	62.8
5. Speech			
6. Vision			
Snellen (Distance)	86	40	46.5
Stereopsis	86	42	48.8
Near Vision	28	14	50.0
7. Hearing (Audio Screening)	86	47	54.7

Table 3-10a: Frequency Distribution of Abnormalities Per Screen

Number of Abnormalities Per Screen	Frequency	Percentage	Cumulative
0	984	68.14	68.14
1	307	21.26	89.40
2	111	7.69	97.09
3	31	2.15	99.24
4	10	0.69	99.93
5	1	0.07	100.00
Total	1444	100.0	100.0

Table 3-10b: Frequency Distribution of Abnormalities Per Screen

Melrose

Number of Abnormalities Per Screen	Frequency	Percentage	Cumulative
0	459	77.5	77.5
1	106	17.9	95.4
2	26	4.4	99.8
3	1	.2	100.0
4	0	0.0	100.0
5	0	0.0	100.0
Total	592	100.0	100.0

Table 3-10c: Frequency Distribution of Abnormalities Per Screen

Tinton

Number of Abnormalities Per Screen	Frequency	Percentage	Cumulative
0	164	62.1	62.1
1	58	22.0	84.1
2	30	11.4	95.5
3	7	2.6	98.1
4	4	1.5	99.6
5	1	.4	100.0
Total	264	100.0	100.0

Table 3-10d: Frequency Distribution of Abnormalities Per Screen

Mitchell

Number of Abnormalities Per Screen	Frequency	Percentage	Cumulative
0	359	61.3	61.3
1	143	24.4	85.7
2	55	9.4	95.1
3	23	3.9	99.0
4	6	1.0	100.0
5	0	0.0	100.0
Total	586	100.0	100.0

Table 3-11: Rates of Abnormalities by Screening Components

Screening Component	# Screened	# Abnormal	% Abnormal
1. History, Growth and development	1442	31	2.1
2. Physical Examination			
a. Eye	1439	21	1.5
b. Ear	1440	30	2.1
c. Nose	1441	155	10.8
d. Mouth and Throat	1440	105	7.3
e. Dental	1439	10	0.7
f. Head and Neck	1439	17	1.2
g. Cardio-pulmonary	1439	73	5.1
h. Abdomen	1439	19	1.3
i. Genito-urinary	1439	10	0.7
j. Musculo-skeletal	1437	26	1.8
k. Neurological	1436	1	0.1
l. Condition of Skin	143[illegible]	87	6.1
m. Other (Specify)	1201	28	2.3
4 a. Anemia (Hemoglobin & Hematocrit)	471	43	9.1
b. Tuberculin Test	369	0	---
c. Sickle Cell Anemia (Hb-Electro-phoresis)	148	1	0.7
d. Lead Test	227	5	2.2
e. Urinalysis	194	3	1.5
5. Speech	28	0	---
6. Vision			
Snellen (Distance)	153	0	---
Stereopsis	158	0	---
Near Vision	55	0	---
7. Hearing (Audio Screening)	163	2	1.2
Total # of Screens	1444	667	46.2

Table 3-12a: Rates of Abnormalities on Initial Screens and Rescreens by Components

Screening Components	Total	Initial Screens		Rescreens	
	Abnormal	# Abnormal	% Abnormal	# Abnormal	% Abnormal
1. History, Growth development	31	22	71.0	9	29.0
2. Physical Examination					
a. Eye	21	15	71.4	6	28.6
b. Ear	30	12	40.0	18	60.0
c. Nose	155	80	51.6	75	48.4
d. Mouth & Throat	105	58	55.2	47	44.8
e. Dental	10	8	80.0	2	20.0
f. Head & Neck	17	11	64.7	6	35.3
g. Cardio-Pulmonary	73	36	49.3	37	50.7
h. Abdomen	19	10	52.6	9	47.4
i. Genito-Urinary	10	5	50.0	5	50.0
j. Musculo-Skeletal	26	16	61.5	10	38.5
k. Neurological	1	1	100.0	0	---
l. Condition of Skin	87	56	64.4	31	35.6
m. Other (Specify)	28	16	57.1	12	42.9
4. a. Anemia (Hemoglobin & Hematocrit)	43	21	48.8	22	51.2
b. Tuberculin Test	0	---		---	
c. Sickle Cell Anemia (Hb-Electrophoresis)	1	1	100.0	---	
d. Lead Test	5	5	100.0	---	
e. Urinalysis	3	3	100.0	---	
5. Speech	0	---			
6. Vision					
Snellen (Distance)	0	---			
Stereopsis	0	---			
Near Vision	0	---			
7. Hearing (Audio Screening)	2	1	50.0	1	50.0
Total	667	377	56.5	290	43.5

Table 3-12b: Rates of Abnormalities on Initial Screens and Rescreens by Components

Melrose

Screening Components	Total Abnormal	Initial Screens # Abnormal	Initial Screens % Abnormal	Rescreens # Abnormal	Rescreens % Abnormal
1. History, Growth & development	0	—	0.0	—	0.0
2. Physical Examination					
a. Eye	5	5	100.0	0	0.0
b. Ear	8	4	50.0	4	50.0
c. Nose	78	45	57.7	33	42.3
d. Mouth & Throat	24	18	75.0	6	25.0
e. Dental	1	1	100.0	0	0.0
f. Head & Neck	0	—	0.0	—	0.0
g. Cardio-Pulmonary	6	4	66.7	2	33.3
h. Abdomen	1	0	0.0	1	100.0
i. Genito-Urinary	2	2	100.0	0	0.0
j. Musculo-Skeletal	10	5	50.0	5	50.0
k. Neurological	1	1	100.0	0	0.0
l. Condition of Skin	12	7	58.3	5	41.7
m. Other (Specify)	6	4	66.7	2	33.3
4. a. Anemia (Hemoglobin & Hematocrit)	2	1	50.0	1	50.0
b. Tuberculin Test	0	—	0.0	—	0.0
c. Sickle Cell Anemia (Hb-Electrophoresis)	0	—	0.0	—	0.0
d. Lead Test	2	2	100.0	0	0.0
e. Urinalysis	3	2	66.7	1	33.3
5. Speech	0	—	0.0	—	0.0
6. Vision					
Snellen (Distance)	0	—	0.0	—	0.0
Stereopsis	0	—	0.0	—	0.0
Near Vision	0	—	0.0	—	0.0
7. Hearing (Audio Screening)	0	—	0.0	—	0.0
Total	161	101	62.7	60	37.3

Table 3-12c: Rates of Abnormalities on Initial Screens and Rescreens by Components

Tinton

Screening Components	Total Abnormal	Initial Screens		Rescreens	
		# Abnormal	% Abnormal	# Abnormal	% Abnormal
1. History, Growth & development	9	9	100.0	0	0.0
2. Physical Examination					
a. Eye	7	7	100.0	0	0.0
b. Ear	8	5	62.5	3	37.5
c. Nose	25	16	64.0	9	36.0
d. Mouth & Throat	27	21	77.8	6	22.2
e. Dental	3	3	100.0	0	0.0
f. Head & Neck	5	1	20.0	4	80.0
g. Cardio-Pulmonary	13	9	69.2	4	30.8
h. Abdomen	8	5	62.5	3	37.5
i. Genito-Urinary	4	1	25.0	3	75.0
j. Musculo-Skeletal	5	5	100.0	0	0.0
k. Neurological	0	—	0.0	—	0.0
l. Condition of Skin	30	24	80.0	6	20.0
m. Other (Specify)	9	4	44.4	5	55.6
4. a. Anemia (Hemoglobin & Hematocrit)	5	3	60.0	2	40.0
b. Tuberculin Test	0	—	0.0	—	0.0
c. Sickle Cell Anemia (Hb-Electrophoresis)	1	1	100.0	0	0.0
d. Lead Test	1	1	100.0	0	0.0
e. Urinalysis	0	—	0.0	—	0.0
5. Speech	0	—	0.0	—	0.0
6. Vision					
Snellen (Distance)	0	—	0.0	—	0.0
Stereopsis	0	—	0.0	—	0.0
Near Vision	0	—	0.0	—	0.0
7. Hearing (Audio Screening)	0	—	0.0	—	0.0
Total	160	115	71.9	45	28.1

Table 3-12d: Rates of Abnormalities on Initial Screens and Rescreens by Components

Mitchell

Screening Components	Total Abnormal	Initial Screens		Rescreens	
		# Abnormal	% Abnormal	# Abnormal	% Abnormal
1. History, Growth & development	22	13	59.1	9	40.9
2. Physical Examination					
a. Eye	9	3	33.3	6	66.7
b. Ear	14	3	21.4	11	78.6
c. Nose	52	19	36.5	33	63.5
d. Mouth & Throat	54	19	35.2	35	64.8
e. Dental	6	4	66.7	2	33.3
f. Head & Neck	12	10	83.3	2	16.7
g. Cardio-Pulmonary	54	23	42.6	31	57.4
h. Abdomen	10	5	50.0	5	50.0
i. Genito-Urinary	4	2	50.0	2	50.0
j. Musculo-Skeletal	11	6	54.5	5	45.5
k. Neurological	0	—	0.0	—	0.0
l. Condition of Skin	45	23	51.1	22	48.9
m. Other (Specify)	13	8	61.5	5	38.5
4. a. Anemia (Hemoglobin & Hematocrit)	36	17	47.2	19	52.8
b. ~~Tuberculin Test~~	0	—	0.0	--	0.0
c. Sickle Cell Anemia (Hb-Electrophroesis)	0	—	0.0	—	0.0
d. Lead Test	2	2	100.0	0	0.0
e. Urinalysis	0	—	0.0	—	0.0
5. Speech	0	—	0.0	—	0.0
6. Vision					
Snellen (Distance)	0	—	0.0	—	0.0
Stereopsis	0	—	0.0	—	0.0
Near Vision	0	—	0.0	—	0.0
7. Hearing (Audio Screening)	2	1	50.0	1	50.0
Total	346	158	45.7	188	54.3

Table 3-13a: Rates of New and Old Abnormalities by Screening Components

Screening Component	Total Abnormal	New		Old	
		#	%	#	%
1. History, Growth and development	31	20	64.5	11	35.5
2. Physical Examination					
a. Eye	21	17	81.0	4	19.0
b. Ear	30	26	86.7	4	13.3
c. Nose	155	135	87.1	20	12.9
d. Mouth and Throat	105	96	91.4	9	8.6
e. Dental	10	10	100.0	0	---
f. Head and Neck	17	10	58.8	7	41.2
g. Cardio-Pulmonary	73	44	60.3	29	39.7
h. Abdomen	19	14	73.7	5	26.3
i. Genito-Urinary	10	8	80.0	2	20.0
j. Musculo-skeletal	26	16	61.5	10	38.5
k. Neurological	1	—		1	100.0
l. Condition of Skin	87	74	85.1	13	14.9
m. Other (Specify)	28	21	75.0	7	25.0
4. a. Anemia (Hemoglobin & Hematocrit)	43	34	79.1	9	20.9
b. Tuberculin Test	0	—		—	
c. Sickle Cell Anemia (Hb-Electro-phoresis)	1	1	100.0	0	---
d. Lead Test	5	4	80.0	1	20.0
e. Urinalysis	3	2	66.7	1	33.3
5. Speech	0	--		--	
6. Vision					
Snellen (Distance)	0	--		--	
Stereopsis	0	--		--	
Near Vision	0	--		--	
7. Hearing (Audio Screening)	2	2	100.0		
Total	667	534	80.1	133	19.9

Table 3-13b: Rates of New and Old Abnormalities by Screening Components

Melrose

Screening Component	Total Abnormal	New #	New %	Old #	Old %
1. History, Growth and development	0	0	—	0	—
2. Physical Examination					
a. Eye	5	4	80.0	1	20.0
b. Ear	8	8	100.0	0	0.0
c. Nose	78	67	85.9	11	14.1
d. Mouth and Throat	24	20	83.3	4	16.7
e. Dental	1	1	100.0	0	0.0
f. Head and Neck	0	0	—	0	—
g. Cardio-Pulmonary	6	2	33.3	4	66.7
h. Abdomen	1	0	0.0	1	100.0
i. Genito-Urinary	2	2	100.0	0	0.0
j. Musculo-skeletal	10	4	40.0	6	60.0
k. Neurological	1	0	0.0	1	100.0
l. Condition of Skin	12	11	91.7	1	8.3
m. Other (Specify)	6	1	16.7	5	83.3
4. a. Anemia (Hemoglobin & Hematocrit)	2	2	100.0	0	0.0
b. Tuberculin Test	0	0	—	0	—
c. Sickle Cell Anemia (Hb-Electro-phoresis)	0	0	—	0	—
d. Lead Test	2	1	50.0	1	50.0
e. Urinalysis	3	2	66.7	1	33.3
5. Speech	0	0	—	0	—
6. Vision					
Snellen (Distance)	0	0	—	0	—
Stereopsis	0	0	—	0	—
Near Vision	0	0	—	0	—
7. Hearing (Audio Screening)	0	0	—	0	—
Total	161	125	77.6	36	22.4

Table 3-13c: Rates of New and Old Abnormalities by Screening Components

Tinton

Screening Component	Total Abnormal	New #	New %	Old #	Old %
1. History, Growth and development	9	7	77.8	2	22.2
2. Physical Examination					
a. Eye	7	7	100.0	0	0.0
b. Ear	8	6	75.0	2	25.0
c. Nose	25	23	92.0	2	8.0
d. Mouth and Throat	27	26	96.3	1	3.7
e. Dental	3	3	100.0	0	0.0
f. Head and Neck	5	1	20.0	4	80.0
g. Cardio-Pulmonary	13	11	84.6	2	15.4
h. Abdomen	8	7	87.5	1	12.5
i. Genito-Urinary	4	2	50.0	2	50.0
j. Musculo-skeletal	5	4	80.0	1	20.0
k. Neurological	0	0	—	0	—
l. Condition of Skin	30	28	93.3	2	6.7
m. Other (Specify)	9	8	88.9	1	11.1
4. a. Anemia (Hemoglobin & Hematocrit)	5	4	80.0	1	20.0
b. Tuberculin Test	0	0	—	0	—
c. Sickle Cell Anemia (Hb-Electro-phoresis)	1	1	100.0	0	0.0
d. Lead Test	1	1	100.0	0	0.0
e. Urinalysis	0	0	—	0	—
5. Speech	0	0	—	0	—
6. Vision					
Snellen (Distance)	0	0	—	0	—
Stereopsis	0	0	—	0	—
Near Vision	0	0	—	0	—
7. Hearing (Audio Screening)	0	0	—	0	—
Total	160	139	86.9	21	13.1

Table 3-13d: Rates of New and Old Abnormalities by Screening Components

Mitchell

Screening Component	Total Abnormal	New		Old	
		#	%	#	%
1. History, Growth and development	22	13	59.1	9	40.9
2. Physical Examination					
a. Eye	9	6	66.7	3	33.3
b. Ear	14	12	85.7	2	14.3
c. Nose	52	45	86.5	7	13.5
d. Mouth and Throat	54	50	92.6	4	7.4
e. Dental	6	6	100.0	0	0.0
f. Head and Neck	12	9	75.0	3	25.0
g. Cardio-Pulmonary	54	31	57.4	23	42.6
h. Abdomen	10	7	70.0	3	30.0
i. Genito-Urinary	4	4	100.0	0	0.0
j. Musculo-skeletal	11	8	72.7	3	27.3
k. Neurological	0	0	—	0	—
l. Condition of Skin	45	35	77.8	10	22.2
m. Other (Specify)	13	12	92.3	1	7.7
4. a. Anemia (Hemoglobin & Hematocrit)	36	28	77.8	8	22.2
b. Tuberculin Test	0	0	—	0	—
c. Sickle Cell Anemia (Hb-Electro-phoresis)	0	0	—	0	—
d. Lead Test	2	2	100.0	0	0.0
e. Urinalysis	0	0	—	0	—
5. Speech	0	0	—	0	—
6. Vision					
Snellen (Distance)	0	0	—	0	—
Stereopsis	0	0	—	0	—
Near Vision	0	0	—	0	—
7. Hearing (Audio Screening)	2	2	100.0	0	0.0
Total	346	270	78.0	76	22.0

Table 3-14a: Rates of New Abnormalities on Initial Screens and Rescreens as a Function of Total Abnormalities

Screening Component	Initial Screens # Abnormal	Initial Screens # New	Initial Screens % New	Rescreens # Abnormal	Rescreens # New	Rescreens % New
1. History Growth & development	22	14	63.6	9	6	66.7
2. Physical Examination						
a. Eye	15	13	86.7	6	4	66.7
b. Ear	12	11	91.7	18	15	83.3
c. Nose	80	74	92.5	75	61	81.3
d. Mouth and Throat	58	56	96.6	47	40	85.1
e. Dental	8	8	100.0	2	2	100.0
f. Head and Neck	11	9	81.8	6	1	16.7
g. Cardio-Pulmonary	36	25	69.4	37	19	51.4
h. Abdomen	10	8	80.0	9	6	66.7
i. Genito-urinary	5	5	100.0	5	3	60.0
j. Musculo-skeletal	16	11	68.8	10	5	50.0
k. Neurological	1	0	0.0	0	0	0.0
l. Condition of Skin	56	49	87.5	31	25	80.6
m. Other (Specify)	16	12	75.0	12	9	75.0
4. a. Anemia (Hemoglobin & Hematocrit)	21	17	81.0	22	17.	77.3
b. Tuberculin Test	0	0	0.0	0	--	--
c. Sickle Cell Anemia (Hb-Electro-phoresis)	1	1	100.0	0	--	--
d. Lead Test	5	4	80.0	0	--	--
e. Urinalysis	3	2	66.7	0	--	--
5. Speech	0	0	0.0	0	--	--
6. Vision						
Snellen (Distance)	0	--	--	0	--	--
Stereopsis	0	--	--	0	--	--
Near Vision	0	--	--	0	--	--
7. Hearing (Audio Screening)	1	1	100.0	1	1	100.0
Total	377	320	84.9	290	214	73.8

Table 3-14b: Rates of New Abnormalities on Initial Screens and Rescreens as a Function of Total Abnormalities --Melrose

Screening Component	Initial Screens			Rescreens		
	# Abnormal	# New	% New	# Abnormal	# New	% New
1. History Growth & development	0	—	0.0	0	—	0.0
2. Physical Examination						
a. Eye	5	4	80.0	0	—	0.0
b. Ear	4	4	100.0	4	4	100.0
c. Nose	45	39	86.7	33	28	84.8
d. Mouth and Throat	18	17	94.4	6	3	50.0
e. Dental	1	1	100.0	0	--	0.0
f. Head and Neck	0	--	0.0	0	--	0.0
g. Cardio-Pulmonary	4	1	25.0	2	1	50.0
h. Abdomen	0	--	0.0	1	0	0.0
i. Genito-urinary	2	2	100.0	0	--	0.0
j. Musculo-skeletal	5	3	60.0	5	1	20.0
k. Neurological	1	0	0.0	0	--	0.0
l. Condition of Skin	7	7	100.0	5	4	80.0
m. Other	4	1	25.0	2	0	0.0
4. a. Anemia (Hemoglobin & Hematocrit)	1	1	100.0	1	1	100.0
b. Tuberculin Test	0	--	0.0	0	—	0.0
c. Sickle Cell Anemia (Hb-Electro-phoresis)	0	--	0.0	0	--	0.0
d. Lead Test	2	1	50.0	0	—	0.0
e. Urinalysis	2	2	100.0	1	0	0.0
5. Speech	0	—	0.0	0	—	0.0
6. Vision						
Snellen (Distance)	0	--	0.0	0	--	0.0
Stereopsis	0	--	0.0	0	--	0.0
Near Vision	0	--	0.0	0	--	0.0
7. Hearing (Audio Screening)	0	--	0.0	0	--	0.0
Total	101	83	82.2	60	42	70.0

Table3-14c: Rates of New Abnormalities on Initial Screens and Rescreens as a Function of Total Abnormalities-- Tinton

Screening Component	Initial Screens			Rescreens		
	# Abnormal	# New	% New	# Abnormal	# New	% New
1. History Growth & development	9	7	77.8	0	--	0.0
2. Physical Examination						
a. Eye	7	7	100.0	0	--	0.0
b. Ear	5	4	80.0	3	2	66.7
c. Nose	16	16	100.0	9	7	77.8
d. Mouth and Throat	21	20	95.2	6	6	100.0
e. Dental	3	3	100.0	0	--	0.0
f. Head and Neck	1	1	100.0	4	0	0.0
g. Cardio-Pulmonary	9	9	100.0	4	2	50.0
h. Abdomen	5	4	80.0	3	3	100.0
i. Genito-urinary	1	1	100.0	3	1	33.0
j. Musculo-skeletal	5	4	80.0	0	--	0.0
k. Neurological	0	--	0.0	0	--	0.0
l. Condition of Skin	24	23	95.8	6	5	83.3
m. Other	4	4	100.0	5	4	80.0
4. a. Anemia (Hemoglobin & Hematocrit)	3	2	66.7	2	2	100.0
b. Tuberculin Test	0	--	0.0	0	--	0.0
c. Sickle Cell Anemia (Hb-Electro-phoresis)	1	1	100.0	0	--	0.0
d. Lead Test	1	1	100.0	0	--	0.0
e. Urinalysis	0	--	0.0	0	--	0.0
5. Speech	0	--	0.0	0	--	0.0
6. Vision						
Snellen (Distance)	0	--	0.0	0	--	0.0
Stereopsis	0	--	0.0	0	--	0.0
Near Vision	0	--	0.0	0	--	0.0
7. Hearing (Audio Screening)	0	--	0.0	0	--	0.0
Total	115	107	93.0	45	32	71.1

Table 3-14d: Rates of New Abnormalities on Initial Screens and Rescreens as a Function of Total Abnormalities--Mitchell

Screening Component	Initial Screens # Abnormal	Initial Screens # New	Initial Screens % New	Rescreens # Abnormal	Rescreens # New	Rescreens % New
1. History Growth & development	13	7	53.8	9	6	66.7
2. Physical Examination						
a. Eye	3	2	66.7	6	4	66.7
b. Ear	3	3	100.0	11	9	81.8
c. Nose	19	19	100.0	33	26	78.8
d. Mouth and Throat	19	19	100.0	35	31	88.6
e. Dental	4	4	100.0	2	2	100.0
f. Head and Neck	10	8	80.0	2	1	50.0
g. Cardio-Pulmonary	23	15	65.2	31	16	51.6
h. Abdomen	5	4	80.0	5	3	60.0
i. Genito-urinary	2	2	100.00	2	2	100.0
j. Musculo-skeletal	6	4	66.7	5	4	80.0
k. Neurological	0	--	0.0	0	--	0.0
l. Condition of Skin	23	19	82.6	22	16	72.7
m. Other	8	7	87.5	5	5	100.0
4. a. Anemia (Hemoglobin & Hematocrit)	17	14	82.4	19	14	73.7
b. Tuberculin Test	0	--	0.0	0	--	0.0
c. Sickle Cell Anemia (Hb-Electro-phoresis)	0	--	0.0	0	--	0.0
d. Lead Test	2	2	100.0	0	--	0.0
e. Urinalysis	0	--	0.0	0	--	0.0
5. Speech	0	--	0.0	0	--	0.0
6. Vision						
Snellen (Distance)	0	--	0.0	0	--	0.0
Stereopsis	0	--	0.0	0	--	0.0
Near Vision	0	--	0.0	0	--	0.0
7. Hearing (Audio Screening)	1	1	100.0	1	1	100.0
Total	158	130	82.3	188	124	66.0

Table 3-15a: Referred Abnormality Rate Per Screen[1]
By Components

Component	Total			Under 1 Year of Age			1-6 Years of Age		
	# Screened	# Referred Abnormalities	% Referred Abnormalities	# Screened Abnormalities	# Referred Abnormalities	% Referred Abnormalities	# Screened Abnormalities	#. Referred Abnormalities	% Referred Abnormalities
1. History, Growth & Development	1442	6	0.4	1024	4	0.4	418	2	0.5
2. Physical Examination									
a. Eye	1439	12	0.8	1023	11	1.1	416	1	0.2
b. Ear	1440	22	1.5	1024	17	1.7	416	5	1.2
c. Nose	1441	97	6.7	1024	80	7.8	417	17	4.1
d. Mouth and Throat	1440	74	5.1	1024	55	5.4	416	19	4.6
e. Dental	1439	7	0.5	1022	1	0.1	417	6	1.4
f. Head and Neck	1439	4	0.3	1023	3	0.3	416	1	0.2
g. Cardio-Pulmonary	1439	38	2.6	1023	31	3.0	416	7	1.7
h. Abdomen	1439	8	0.6	1023	6	0.6	416	2	0.5
i. Genito-urinary	1439	8	0.6	1023	8	0.8	416	0	0.0
j. Musculo-skeletal	1437	11	0.8	1023	9	0.9	414	2	0.5
k. Neurological	1436	0	0.0	1020	0	0.0	416	0	0.0
l. Condition of Skin	1434	46	3.2	1018	44	4.3	416	2	0.5
m. Other (Specify)	1201	16	1.3	855	12	1.4	346	4	1.2
4. a. Anemia (Hemoglobin & Hematocrit)	471	34	7.2	280	29	10.4	190	5	2.6
b. Tuberculin Test	369	0	0.0	109	0	0.0	259	0	0.0
c. Sickle Cell Anemia (Hb-Electro-phoresis)	148	0	0.0	70	0	0.0	77	0	0.0
d. Lead Test	227	3	1.3	83	0	0.0	143	3	2.1
e. Urinalysis	194	3	1.5	2	0	0.0	191	3	1.6
5. Speech	28	0	0.0	1	0	0,0	26	0	0.0
6. Vision	158	0	0.0	0	-	-	360	0	0.0
Snellen (Distance)	153	0	0.0	0	-	-	151	0	0.0
Stereopsis	158	0	0.0	0	-	-	156	0	0.0
Near Vision	55	0	0.0	0	-	-	53	0	0.0
7. Hearing (Audio Screening)	163	1	0.6	1	0	0.0	161	1	0.6
Total	1443	390	27.0	1025	310	30.2	418	80	19.1

1. Referred abnormality rate per screen was obtained by dividing the number of referred abnormalities by the number of screens.

Table 3-15b: Referred Abnormality Rate Per Screen[1]
By Components--Melrose

Component	Total # Screened	Total # Referred Abnormalities	Total % Referred Abnormalities	Under 1 Year of Age # Screened	Under 1 Year of Age # Referred Abnormalities	Under 1 Year of Age % Referred Abnormalities	1-6 Years of Age # Screened	1-6 Years of Age # Referred Abnormalities	1-6 Years of Age % Referred Abnormalities
1. History, Growth & Development	592	0	0	384	0	0.0	208	0	0.0
2. Physical Examination									
a. Eye	592	3	0.5	384	3	0.8	208	0	0.0
b. Ear	592	5	0.8	384	5	1.3	208	0	0.0
c. Nose	592	50	8.4	384	41	10.7	208	9	4.3
d. Mouth and Throat	592	20	3.4	384	13	3.4	208	7	3.4
e. Dental	591	1	0.2	383	0	0.0	208	1	0.5
f. Head and Neck	591	0	0.0	383	0	0.0	208	0	0.0
g. Cardio-Pulmonary	591	3	0.5	383	2	0.5	208	1	0.5
h. Abdomen	591	0	0.0	383	0	0.0	208	0	0.0
i. Genito-urinary	591	2	0.3	383	2	0.5	208	0	0.0
j. Musculo-skeletal	591	3	0.5	383	3	0.8	208	0	0.0
k. Neurological	590	0	0.0	382	0	0.0	208	0	0.0
l. Condition of Skin	590	4	0.7	382	3	0.8	208	1	0.5
m. Other (Specify)	537	3	0.6	351	2	0.6	186	1	0.5
3. a. Anemia (Hemoglobin & Hematocrit)	191	2	1.0	104	2	1.9	87	0	0.0
b. Tuberculin Test	166	0	0.0	42	0	0.0	124	0	0.0
c. Sickle Cell Anemia (Hb-Electro-phoresis)	74	0	0.0	34	0	0.0	40	0	0.0
d. Lead Test	109	1	0.9	36	0	0.0	73	1	1.4
e. Urinalysis	88	3	3.4	2	0	0.0	86	3	3.5
5. Speech	6	0	0.6	1	0	0.0	5	0	0.0
6. Vision									
Snellen (Distance)	69	0	0.0	1	0	0.0	68	0	0.0
Stereopsis	71	0	0.0	1	0	0.0	70	0	0.0
Near Vision	21	0	0.0	1	0	0.0	20	0	0.0
7. Hearing (Audio Screening)	70	0	0.0	1	0	0.0	69	0	0.0
Total									

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1. Referred abnormality rate per screen was obtained by dividing the number of referred abnormalities by the number of screens.

Table-3-15c: Referred Abnormality Rate Per Screen[1] By Components --Tinton

Component	Total			Under 1 Year of Age			1-6 Years of Age		
	# Screened	# Referred Abnormalities	% Referred Abnormalities	# Screened	# Referred Abnormalities	% Referred Abnormalities	# Screened	# Referred Abnormalities	% Referred Abnormalities
1. History, Growth & Development	264	3	1.1	188	2	1.1	76	1	1.3
2. Physical Examination									
a. Eye	263	6	2.3	188	6	3.2	75	0	0.0
b. Ear	263	6	2.3	188	5	2.7	75	1	1.3
c. Nose	264	25	9.5	188	20	10.6	76	5	6.6
d. Mouth and Throat	263	24	9.1	188	18	9.6	75	6	8.0
e. Dental	264	2	0.8	188	0	0.0	76	2	2.6
f. Head and Neck	263	1	0.4	188	1	0.5	75	0	0.0
g. Cardio-Pulmonary	263	12	4.6	188	9	4.8	75	3	4.0
h. Abdomen	263	6	2.3	188	5	2.7	75	1	1.3
i. Genito-urinary	263	3	1.1	188	3	1.6	75	0	0.0
j. Musculo-skeletal	261	3	1.1	188	2	1.1	73	1	1.4
k. Neurological	263	0	0.0	188	0	0.0	75	0	0.0
l. Condition of Skin	260	27	10.4	185	27	14.6	75	0	0.0
m. Other (Specify)	186	9	4.8	126	6	4.8	60	3	5.0
a. Anemia (Hemoglobin & Hematocrit)	72	4	5.6	44	4	9.1	28	0	0.0
b. Tuberculin Test	80	0	0.0	29	0	0.0	51	0	0.0
c. Sickle Cell Anemia (Hb-Electro-phoresis)	26	0	0.0	15	0	0.0	11	0	0.0
d. Lead Test	44	1	2.3	18	0	0.0	26	1	3.8
e. Urinalysis	40	0	0.0	1	0	0.0	39	0	0.0
Speech	0	0	0.0	0	0	0.0	0	0	0.0
Vision									
Snellen (Distance)	35	0	0.0	1	0	0.0	34	0	0.0
Stereopsis	36	0	0.0	1	0	0.0	35	0	0.0
Near Vision	14	0	0.0	0	0	0.0	14	0	0.0
Hearing (Audio Screening)	35	0	0.0	1	0	0.0	34	0	0.0
Total									

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1. Referred abnormality rate per screen was obtained by dividing the number of referred abnormalities by the number of screens.

Table 3-15d: Referred Abnormality Rate Per Screen
By Components--Mitchell

Component	Total			Under 1 Year of Age			1-6 Years of Age		
	# Screened	# Referred Abnormalities	% Referred Abnormalities	# Screened	# Referred Abnormalities	% Referred Abnormalities	# Screened	# Referred Abnormalities	% Referred Abnormalities
1. History, Growth & Development	585	3	0.5	451	2	0.4	134	1	0.7
2. Physical Examination									
a. Eye	583	3	0.5	450	2	0.4	133	1	0.8
b. Ear	584	11	1.9	451	8	1.8	133	3	2.3
c. Nose	584	22	3.8	451	19	4.2	133	3	2.3
d. Mouth and Throat	584	30	5.1	451	24	5.3	133	6	4.5
e. Dental	583	4	0.7	450	1	0.2	133	3	2.3
f. Head and Neck	584	3	0.5	451	2	0.4	133	1	0.8
g. Cardio-Pulmonary	584	23	3.9	451	20	4.4	133	3	2.3
h. Abdomen	584	2	0.3	451	1	0.2	133	1	0.8
i. Genito-urinary	584	3	0.5	451	3	0.7	133	0	0.0
j. Musculo-skeletal	584	5	0.9	451	4	0.9	133	1	0.8
k. Neurological	582	0	0.0	449	0	0.0	133	0	0.0
l. Condition of Skin	583	15	2.6	450	14	3.1	133	1	0.8
m. Other (Specify)	477	4	0.8	376	4	1.1	101	0	0.0
4. a. Anemia (Hemoglobin & Hematocrit)	206	28	13.6	131	23	17.6	75	5	6.7
b. Tuberculin Test	122	0	0.0	38	0	0.0	84	0	0.0
c. Sickle Cell Anemia (Hb-Electro-phoresis)	47	0	0.0	21	0	0.0	26	0	0.0
d. Lead Test	73	1	1.4	29	0	0.0	44	1	2.3
e. Urinalysis	65	0	0.0	0	0	0.0	65	0	0.0
5. Speech	21	0	0.0	0	0	0.0	21	0	0.0
6. Vision									
Snellen (Distance)	48	0	0.0	0	0	0.0	48	0	0.0
Stereopsis	50	0	0.0	0	0	0.0	50	0	0.0
Near Vision	19	0	0.0	0	0	0.0	19	0	0.0
7. Hearing (Audio Screening)	57	1	1.8	0	0	0.0	57	1	1.8
Total									

1. Referred abnormality rate per screen was obtained by dividing the number of referred abnormalities by the number of screens.

Table 3-16a: Referred Abnormality Rate Per Abnormality[1] By Components

Screening Component	Total: # Abnormalities	Total: # Referred Abnormalities	Total: % Referred Abnormalities	Under 1 Year of Age: # Abnormalities	Under 1 Year of Age: # Referred Abnormalities	Under 1 Year of Age: % Referred Abnormalities	1-6 Years of Age: # Abnormalities	1-6 Years of Age: # Referred Abnormalities	1-6 Years of Age: % Referred Abnormalities
1. History, Growth & Development	31	6	19.4	23	4	17.4	8	2	25.0
2. Physical Examination									
a. Eye	21	12	57.1	18	11	61.1	3	1	33.3
b. Ear	30	22	73.3	22	17	77.3	8	5	62.5
c. Nose	155	97	62.6	122	80	65.6	33	17	51.5
d. Mouth and Throat	105	74	70.5	79	55	69.6	26	19	73.1
e. Dental	10	7	70.0	3	1	33.3	7	6	85.7
f. Head and Neck	17	4	23.5	14	3	21.4	3	1	33.3
g. Cardio-Pulmonary	73	38	52.1	58	31	53.4	15	7	46.7
h. Abdomen	19	8	42.1	15	6	40.0	4	2	50.0
i. Genito-urinary	10	8	80.0	9	8	88.9	1	0	0.0
j. Musculo-skeletal	26	11	42.3	21	9	42.9	5	2	40.0
k. Neurological	1	0	0.0	1	0	0.0	0	-	-
l. Condition of Skin	87	46	52.9	76	44	57.9	11	2	18.2
m. Other (Specify)	28	16	57.1	22	12	54.5	6	4	66.7
4. a. Anemia (Hemoglobin & Hematocrit)	43	34	79.1	37	29	78.4	6	5	83.3
b. Tuberculin Test	0	-	-	0	-	-	0	-	-
c. Sickle Cell Anemia (Hb-Electro-phoresia)	1	0	0.0	0	-	-	1	0	0.0
d. Lead Test	5	3	60.0	0	-	-	5	3	60.0
e. Urinalysis	3	3	100.0	0	-	-	3	3	100.0
5. Speech	0	-	-	0	-	-	0	-	-
6. Vision (Composite)	0	-	-	0	0	-	0	-	-
Snellen (Distance)	0	-	-	0	-	-	0	-	-
Stereopsis	0	-	-	0	-	-	0	-	-
Near Vision	0	-	-	0	-	-	0	-	-
7. Hearing (Audio Screening)	2	1	50.0	0	-	-	2	1	50.0
Total	667	390	58.5	520	310	59.6	147	80	54.4

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1. Referred abnormality rate per abnormality was obtained by dividing the number of referred abnormalities by the number of abnormalities.

Table 3-16b: Referred Abnormality Rate Per Abnormality[1]
By Components

Melrose

	Total			Under 1 Year of Age			1-6 Years of Age		
Screening Component	# Abnormalities	# Referred Abnormalities	% Referred Abnormalities	# Abnormalities	# Referred Abnormalities	% Referred Abnormalities	# Abnormalities	# Referred Abnormalities	% Referred Abnormalities
1. History, Growth & Development	0	0	0.0	0	0	0.0	0	0	0.0
2. Physical Examination									
a. Eye	5	3	60.0	4	3	75.0	1	0	0.0
b. Ear	8	5	62.5	7	5	71.4	1	0	0.0
c. Nose	78	50	64.1	57	41	71.9	21	9	42.9
d. Mouth and Throat	24	20	83.3	16	13	81.2	8	7	87.5
e. Dental	1	1	100.0	0	0	0.0	1	1	100.0
f. Head and Neck	0	0	0.0	0	0	0.0	0	0	0.0
g. Cardio-Pulmonary	6	3	50.0	3	2	66.7	3	1	33.3
h. Abdomen	1	0	0.0	0	0	0.0	1	0	0.0
i. Genito-urinary	2	2	100.0	2	2	100.0	0	0	0.0
j. Musculo-skeletal	10	3	33.3	9	3	33.3	1	0	0.0
k. Neurological	1	0	0.0	1	0	0.0	0	0	0.0
l. Condition of Skin	12	4	33.3	10	3	30.0	2	1	50.0
m. Other	6	3	50.0	4	2	50.0	2	1	50.0
4. a. Anemia (Hemoglobin & Hematocrit)	2	2	100.0	2	2	100.0	0	0	0.0
b. Tuberculin Test	0	0	0.0	0	0	0.0	0	0	0.0
c. Sickle Cell Anemia (Hb-Electro-phoresis)	0	0	0.0	0	0	0.0	0	0	0.0
d. Lead Test	2	1	50.0	0	0	0.0	2	1	50.0
e. Urinalysis	3	3	100.0	0	0	0.0	3	3	100.0
5. Speech	0	0	0.0	0	0	0.0	0	0	0.0
6. Vision (Composite)									
Snellen (Distance)	0	0	0.0	0	0	0.0	0	0	0.0
Stereopsis	0	0	0.0	0	0	0.0	0	0	0.0
Near Vision	0	0	0.0	0	0	0.0	0	0	0.0
7. Hearing (Audio Screening)	0	0	0.0	0	0	0.0	0	0	0.0
Total	161	100	62.1	115	76	66.1	46	24	52.2

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1. Referred abnormality rate per abnormality was obtained by dividing the number of referred abnormalities by the number of abnormalities

Table 3-16c: Referred Abnormality Rate Per Abnormality[1]
By Components
Tinton

Screening Component	Total # Abnormalities	Total # Referred Abnormalities	Total % Referred Abnormalities	Under 1 Year of Age # Abnormalities	Under 1 Year of Age # Referred Abnormalities	Under 1 Year of Age % Referred Abnormalities	1-6 Years of Age # Abnormalities	1-6 Years of Age # Referred Abnormalities	1-6 Years of Age % Referred Abnormalities
1. History, Growth & Development	9	3	33.3	4	2	50.0	5	1	20.0
2. Physical Examination									
a. Eye	7	6	85.7	6	6	100.0	1	0	0.0
b. Ear	8	6	75.0	6	5	83.3	2	1	50.0
c. Nose	25	25	100.0	20	20	100.0	5	5	100.0
d. Mouth and Throat	27	24	88.9	21	18	85.7	6	6	100.0
e. Dental	3	2	66.7	0	0	0.0	3	2	66.7
f. Head and Neck	5	1	20.0	5	1	20.0	0	0	0.0
g. Cardio-Pulmonary	13	12	92.3	9	9	100.0	4	3	75.0
h. Abdomen	8	6	75.0	7	5	71.4	1	1	100.0
i. Genito-urinary	4	3	75.0	3	3	100.0	1	0	0.0
j. Musculo-skeletal	5	3	60.0	3	2	66.7	2	1	50.0
k. Neurological	0	0	0.0	0	0	0.0	0	0	0.0
l. Condition of Skin	30	27	90.0	28	27	96.4	2	0	0.0
m. Other	9	9	100.0	6	6	100.0	3	3	100.0
4. a. Anemia (Hemoglobin & Hematocrit)	5	4	80.0	4	4	100.0	1	0	0.0
b. Tuberculin Test	0	0	0.0	0	0	0.0	0	0	0.0
c. Sickle Cell Anemia (Hb-Electro-phoresis)	1	0	0.0	0	0	0.0	1	0	0.0
d. Lead Test	1	1	100.0	0	0	0.0	1	1	100.0
e. Urinalysis	0	0	0.0	0	0	0.0	0	0	0.0
5. Speech	0	0	0.0	0	0	0.0	0	0	0.0
6. Vision (Composite)									
Snellen (Distance)	0	0	0.0	0	0	0.0	0	0	0.0
Stereopsis	0	0	0.0	0	0	0.0	0	0	0.0
Near Vision	0	0	0.0	0	0	0.0	0	0	0.0
7. Hearing (Audio Screening)	0	0	0.0	0	0	0.0	0	0	0.0
Total	160	132	82.5	122	108	88.5	38	24	63.2

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1. Referred abnormality rate per abnormality was obtained by dividing the number of referred abnormalities

Table 3-10d: Referred Abnormality Rate Per Abnormality[1]
By Components

Mitchell

Screening Component	Total # Abnormalities	Total # Referred Abnormalities	Total % Referred Abnormalities	Under 1 Year of Age # Abnormalities	Under 1 Year of Age # Referred Abnormalities	Under 1 Year of Age % Referred Abnormalities	1-6 Years of Age # Abnormalities	1-6 Years of Age # Referred Abnormalities	1-6 Years of Age % Referred Abnormalities
1. History, Growth & Development	22	3	13.6	19	2	10.5	3	1	33.3
2. Physical Examination									
a. Eye	9	3	33.3	8	2	25.0	1	1	100.0
b. Ear	14	11	78.6	10	8	80.0	4	3	75.0
c. Nose	52	22	42.3	45	19	42.2	7	3	42.9
d. Mouth and Throat	54	30	55.6	42	24	57.1	12	6	50.0
e. Dental	6	4	66.7	3	1	33.3	3	3	100.0
f. Head and Neck	12	3	25.0	9	2	22.2	3	1	33.0
g. Cardio-Pulmonary	54	23	42.6	46	20	43.5	8	3	37.5
h. Abdomen	10	2	20.0	8	1	12.5	2	1	50.0
i. Genito-urinary	4	3	75.0	4	3	75.0	0	0	0.0
j. Musculo-skeletal	11	5	45.5	9	4	44.4	2	1	50.0
k. Neurological	0	0	0.0	0	0	0.0	0	0	0.0
l. Condition of Skin	45	15	33.0	38	14	36.8	7	1	14.3
m. Other	13	4	30.8	12	4	33.3	1	0	0.0
4. a. Anemia (Hemoglobin & Hematocrit)	36	28	77.8	31	23	74.2	5	5	100.0
b. Tuberculin Test	0	0	0.0	0	0	0.0	0	0	0.0
c. Sickle Cell Anemia (Hb-Electro-phoresis)	0	0	0.0	0	0	0.0	0	0	0.0
d. Lead Test	2	1	50.0	0	0	0.0	2	1	50.0
e. Urinalysis	0	0	0.0	0	0	0.0	0	0	0.0
5. Speech	0	0	0.0	0	0	0.0	0	0	0.0
6. Vision (Composite)									
Snellen (Distance)	0	0	0.0	0	0	0.0	0	0	0.0
Stereopsis	0	0	0.0	0	0	0.0	0	0	0.0
Near Vision	0	0	0.0	0	0	0.0	0	0	0.0
7. Hearing (Audio Screening)	2	1	50.0	0	0	0.0	2	1	50.0
Total	346	158	45.7	284	127	44.7	52	31	59.6

1. Referred abnormality rate per abnormality was obtained by dividing the number of referred abnormalities

Table 3-17: Confirmation of the Existence of a Health Problem for Problems Requiring Treatment

	Melrose	Tinton	Mitchell	Total
Confirmed	(67) 97.10%	(104) 100.0%	(116) 98.31%	(287) 98.63%
Not Confirmed	(2) 2.90%	(0) 0.0%	(2) 1.69%	(4) 1.37%
Total	(69) 100.0%	(104) 100.0%	(118) 100.0%	(291) 100.0%

Table 3-18: Confirmation of the Diagnosis of a Health Problem for Problems Requiring Treatment

	Melrose	Tinton	Mitchell	Total
Confirmed	(67) 97.10%	(101) 99.02%	(116) 100.0%	(284) 98.95%
Not Confirmed	(2) 2.90%	(1) .98%	(0) 0.0%	(3) 1.05%
Total	(69) 100.0%	(102) 100.0%	(116) 100.0%	(287) 100.0%

Table 3-19: Distribution of Problems Requiring Treatment by Symptomatic-Asymptomatic

	Melrose	Tinton	Mitchell	Total
Symptomatic	(56) 93.33%	(48) 87.27%	(47) 51.09%	(151) 72.95%
Asymptomatic	(4) 6.67%	(7) 12.73%	(45) 48.91%	(56) 27.05%
Total	(60) 100.0%	(55) 100.0%	(92) 100.0%	(207) 100.0%

Table 3-20: Distribution of Problems Requiring Treatment by Acute-Chronic

	Melrose	Tincon	Mitchell	Total
Acute	(51) 94.44%	(48) 94.12%	(92) 82.88%	(191) 88.43%
Chronic	(3) 5.56%	(3) 5.88%	(19) 17.12%	(25) 11.57%
Total	(54) 100.0%	(51) 100.0%	(111) 100.0%	(216) 100.0%

Table 3-21: Distribution of Problems Requiring Treatment by Severity

Severity Score	Melrose	Tinton	Mitchell	Total
1 (Mild)	(36) 53.73%	(29) 29.00%	(36) 30.51%	(101) 35.44%
2	(16) 23.88%	(57) 57.00%	(55) 46.61%	(128) 44.91%
3 (Moderate)	(15) 22.39%	(14) 14.00%	(25) 21.19%	(54) 18.95%
4	(0) 0.0%	(0) 0.0%	(2) 1.69%	(2) .70%
5 (Severe)	(0) 0.0%	(0) 0.0%	(0) 0.0%	(0) 0.0%
Total	(67) 100.0%	(100) 100.0%	(118) 100.0%	(285) 100.0%

Table 3-22: Caretaker's Awareness of
Problems Requiring Treatment

	Melrose	Tinton	Mitchell	Total
1. Previously Unknown[1]	(61) 91.05%	(88) 97.78%	(97) 81.51%	(246) 89.13%
2. Previously Known[2]				
A. Never under Care	(4) 5.97%	(1) 1.11%	(11) 9.25%	(16) 5.80%
B. Formerly under Care	(1) 1.49%	(1) 1.11%	(9) 7.56%	(11) 3.98%
C. Presently under Care	(1) 1.49%	(0) 0.0%	(2) 1.68%	(3) 1.09%
Total	(67) 100.0%	(90) 100.0%	(119) 100.0%	(276) 100.0%

[1] Unknown prior to the CHS screen.
[2] Known prior to the CHS screen.

Table 3-23: Distribution of Problems Requiring Treatment
by Ultimate Outcome

Outcome	Melrose	Tinton	Mitchell	Total
Resolved	(59) 86.76%	(64) 61.54%	(72) 60.00%	(195) 66.78%
Not Resolved	(9) 13.24%	(40) 38.46%	(48) 40.00%	(97) 33.32%
Total	(68) 100.0%	(104) 100.0%	(120) 100.0%	(292) 100.0%

Table 3-24: Distribution of Resolved Problems Requiring Treatment by Reason for Resolution

	Melrose	Tinton	Mitchell	Total
1. Resolved in One Visit				
A. Condition minor: Treatment completed in one visit	(47) 79.67%	(12) 18.75%	(41) 56.94%	(100) 51.28%
B. Condition presumed cured or inactive within ten days of initial treatment	(3) 5.08%	(39) 60.94%	(17) 23.61%	(59) 30.26%
C. Condition noted, but treatment not advisable or warranted	(3) 5.08%	(2) 3.12%	(4) 5.56%	(9) 4.61%
2. Resolved in More than One Visit				
A. Treatment plan completed, with child cured or problem inactive	(6) 10.17%	(11) 17.19%	(10) 13.89%	(27) 13.85%
Total	(59) 100.0%	(64) 100.0%	(72) 100.0%	(195) 100.0%

Table 3-25: Distribution of Unresolved Problems Requiring Treatment by Final Status

	Melrose	Tinton	Mitchell	Total
1. Child Remains Under Care	(3) 33.33%	(34) 85.00%	(34) 70.8%	(71) 73.2%
2. Child Not Under Care				
A. Family Declines Participation and/or Fails to show for Appointment(s)	(6) 66.67%	(6) 15.00%	(13) 27.08%	(25) 25.77%
B. Family moves out of Jurisdiction	(0) 0.0%	(0) 0.0%	(1) 2.08%	(1) 1.03%
Total	(9) 100.0%	(40) 100.0%	(48) 100.0%	(97) 100.0%

Table 3-26: Distribution of Problems Requiring Treatment by Number of Visits Required For Problem Resolution or Termination[1]

Number of Visits	Melrose	Tinton	Mitchell	Total
1	(58) 84.06%	(82) 82.00%	(93) 76.86%	(233) 80.35%
2	(7) 10.14%	(15) 15.00%	(24) 19.83%	(46) 15.86%
3 or more	(4) 5.80%	(3) 3.00%	(4) 3.31%	(11) 3.79%
Total	(69) 100.0%	(100) 100.0%	(121) 100.0%	(290) 100.0%

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[1] If a problem remained under treatment at the termination of the project, the number of visits recorded presents those that occurred during the project period.

Table 3-27: Distribution of Resolved Problems Requiring Treatment by Number of Visits Necessary for Problem Resolution

	Melrose	Tinton	Mitchell	Total
One Visit	(53) 89.83%	(51) 79.69%	(62) 86.11%	(166) 85.13%
More than one Visit	(6) 10.17%	(13) 20.31%	(10) 13.89%	(29) 14.87%
Total	(59) 100.0%	(64) 100.0%	(72) 100.0%	(195) 100.0%

Table 3-28: Comparison of the Activities Performed by the Control Clerk and the Case Monitors

Task	Control Clerk Melrose	Case Monitor Tinton	 Mitchell	 Case Monitor Mean	Overall Mean
Screening Completion Activities	(6.84)[1] 24.0%[2]	(4.22) 14.7%	(7.13) 23.1%	(5.87) 19.6%	(6.17) 20.9%
Problem Resolution Follow-Up Activities	(0.84) 3.0%	(0.39) 1.4%	(1.70) 5.5%	(1.13) 3.8%	(1.04) 3.5%
Clerical and Administrative	(5.71) 20.0%	(17.81) 62.2%	(14.90) 48.2%	(16.16) 54.0%	(12.90) 43.8%
Time Unaccounted For	(15.12) 53.0%	(6.22) 21.7%	(7.17) 23.2%	(6.76) 22.6%	(9.39) 31.8%
Total Hours worked per week	(28.51) 100.0%	(28.64) 100.0%	(30.90) 100.0%	(29.92) 100.0%	(29.48) 100.0%
N[3]	24	23	30	53	77

1- Numbers within parentheses represent mean number of hours per week.

2- Percentages represent percentage of time per week.

3-N represents the number of weeks for which data are reported.

Table 3-29: Child's Age

Case Monitoring Sample

	Melrose	Tinton	Mitchell	Total
0 - 6 months	(144) 34.4%	(82) 44.6%	(132) 47.5%	(358) 40.7%
6 - 12 months	(50) 12.0%	(17) 9.2%	(29) 10.4%	(96) 10.9%
1 - 2 years	(81) 19.4%	(32) 17.4%	(30) 10.8%	(143) 16.3%
2 - 3 years	(53) 12.7%	(14) 7.6%	(16) 5.7%	(83) 9.4%
3 - 4 years	(35) 8.4%	(10) 5.4%	(33) 11.9%	(78) 8.9%
4 - 5 years	(44) 10.5%	(23) 12.5%	(23) 8.3%	(90) 10.2%
Over 5 years	(11) 2.6%	(6) 3.3%	(15) 5.4%	(32) 3.6%
Total	(418) 100.0%	(184) 100.0%	(278) 100.0%	(880) 100.0%

Table 3-30: Mother's Age

Case Monitoring Sample

	Melrose	Tinton	Mitchell	Total
Under 19	(43) 10.5%	(23) 12.6%	(30) 10.8%	(96) 11.0%
19 - 22	(107) 26.0%	(48) 26.2%	(77) 27.7%	(232) 26.6%
23 - 26	(91) 22.1%	(41) 22.4%	(58) 20.8%	(190) 21.7%
27 - 30	(92) 22.3%	(32) 17.5%	(55) 19.8%	(179) 20.5%
31 - 35	(50) 12.1%	(24) 13.1%	(35) 12.6%	(109) 12.5%
Over 35	(29) 7.0%	(15) 8.2%	(23) 8.3%	(67) 7.7%
Total	(412) 100.0%	(183) 100.0%	(278) 100.0%	(873) 100.0%

Table 3-31: Mother's Ethnicity

Case Monitoring Sample

	Melrose	Tinton	Mitchell	Total
Black	(146) 35.5%	(82) 44.6%	(62) 22.2%	(290) 33.1%
White	(3) 0.7%	(1) 0.5%	(2) 0.7%	(6) 0.7%
Hispanic	(262) 63.6%	(101) 54.9%	(213) 76.4%	(576) 65.8%
Other	(1) 0.2%	(0) 0.0%	(2) 0.7%	(3) 0.3%
Total	(412) 100.0%	(184) 100.0%	(279) 100.0%	(875) 100.0%

Table 3-32: Mother's Education

Case Monitoring Sample

	Melrose	Tinton	Mitchell	Total
0 - 5	(19) 5.1%	(14) 7.8%	(23) 8.3%	(56) 6.8%
6 - 7	(20) 5.4%	(10) 5.6%	(30) 10.8%	(60) 7.2%
8 - 11	(185) 49.9%	(82) 45.8%	(152) 54.7%	(419) 50.6%
12	(115) 31.0%	(70) 39.1%	(63) 22.6%	(248) 30.0%
Over 12	(32) 8.6%	(3) 1.7%	(10) 3.6%	(45) 5.4%
Total	(371) 100.0%	(179) 100.0%	(278) 100.0%	(828) 100.0%

Table 3-33: Mother's Years of Residency in New York City

Case Monitoring Sample

Years of Residency	Melrose	Tinton	Mitchell	Total
1- Not Born in NYC A. 0 - 5 years	(54) 13.9%	(25) 13.7%	(50) 17.9%	(129) 15.2%
B. 6 - 10	(76) 19.5%	(34) 18.6%	(50) 17.9%	(160) 18.8%
C. 11 - 15	(48) 12.3%	(20) 10.9%	(36) 12.9%	(104) 12.2%
D. Over 15	(51) 13.1%	(20) 10.9%	(44) 15.8%	(115) 13.5%
2- Born in NYC	(160) 41.2%	(84) 45.9%	(99) 35.5%	(343) 40.3%
Total	(389) 100.0%	(183) 100.0%	(279) 100.0%	(851) 100.0%

Chapter 4: Developmenatl Assessment

Introduction

The main objective of the developmental portion of this project was to compare two developmental screening procedures: a one-tier system and a two-tier system. In the one-tier, which was used at Melrose (the control clinic), children were screened once -- by a clinician. The clinician used a recently-developed screening device called the Developmental Progress Chart (DPC), which contains items borrowed from a number of tests, such as the Denver Developmental Screening Test. The clinician determined whether or not the child passed the test, and whether or not a referral for a diagnostic work-up was in order. Except for the addition, of the DPC, this is the same system currently used at all New York City CHS's, and served as the control condition in the study.

In the two-tier system, used at Mitchell and Tinton, both a bilingual paraprofessional and a clinician participated in screening the children. The way this worked was that first, the paraprofessional screened a child using the DPC. If the child passed this screen, the clinician followed with a very brief screen of his own. If, however, the child failed, the the clinician re-tested the child using the DPC. Again, as in the one-tier system, the clinician decided upon the course of action to be followed as a result of his screen.

The two-tier system was expected to be advantageous because of (a) the paraprofessional's bilingual ability, and (b) the

additional time that was available for developmental assessment. With regard to the language issue, only two of the six clinicians servicing the three PTC's as developmental screeners were fluent in Spanish. The others were greatly handicapped in eliciting accurate developmental histories from non-English speaking parents. The screener was expected to play an important role in shoring up this deficiency.

As far as time was concerned, a greater amount of it was available for screening children in the two, than in the one-tier system. Children were to receive a far more comprehensive screen in the two-tier system, in that they were screened on two independent occasions for a longer period, overall.

For both of the above reasons, it was hypothesized that two-tier screening would be superior to one-tier. Their relative effectiveness was determined by the number of developmental disorders uncovered by each. It was therefore expected that more developmental problems would be detected with two, than with one-tier screening.

Methods

The Developmental Progress Chart

The background history of the developmental screening component of the EPSDT Project concerns the development of

138<

the instrument used, its piloting in the Child Health Stations and attempts to work with the medical staff around developmental screening.

In 1970, the Director of the Bureau of Child Health, Dr. Grossi, saw the need to revise the part of the record form in Child Health which involves questions concerning the age at which a child achieved certain developmental milestones. A pediatrician with interest and training in child development, Dr. Goldberg, was hired to devise this revision. An instrument which was to comprise this revision was developed and piloted between 1970 and 1974. The focus of the instrument was to provide the NYC Child Health clinicians (mainly physicians) with a developmental screening instrument that would detect developmental delays that needed further diagnostic or therapeutic attention prior to school entrance, was brief enough to incorporate within a 15-minute (total) pediatric appraisal, and was appropriate to the diversity of cultural backgrounds of the New York City Child Health population.

An eclectic group of items were selected as a result of literature research and consultation with numerous experts and centers. Items were chosen so that the conditions considered prevalent and significant as a source of developmental delay during the first five years of life could be screened out (e.g., cerebral palsy, mental retardation, autism, hearing loss). A parental observation column was added because of the

high incidence of child abuse and the importance of parental attitude and interaction for the child's achievements. Several salient factors that would place a child at risk for future development were chosen (such as abnormal birth history, emotional or medical illness of a parent) to alert staff to children who might be at potential risk. The method chosen was to have the clinicians observe directly some aspect of the child's functioning within the context of a pediatric examination rather than obtain the caretaker's view of the child or their memory of when changes occurred in the child's abilities or performance. The two major obstacles were in motivating all the clinicians to do this and to have them invest the energy to engage the child in play or conversation during the medical examination, a time when children are often apprehensive or frightened.

The instrument was initially piloted at Gun Hill Child Health Station in the North Bronx on a population that was predominantly coming from Black semi-skilled and bluecollar working families. The physicians were instructed in the use of the instrument and children who failed age-appropriate items were given appointments to see the pediatric developmental specialist at the same Child Health Station on a given day within 1-4 weeks. The developmental specialist would do a developmental examination in greater depth in order to corroborate or refute the initial screening. Children considered by her to have developmental pathology were referred to the Kennedy Center

140<

(Bronx Municipal Hospital complex) for diagnostic work-up and therapeutic recommendation. Children were periodically sampled and screened prior to their being seen by the physicians to see if there would be "false negatives" or children missed by the screening procedure who seemed deviant to another screener and in need of further assessment. In order to clarify items that were ambiguous or non-productive, the instrument underwent several revisions by virtue of repeated observation of and feedback from staff. Items were also added to try and prevent too many false negatives. The biggest problem was in false positives or over-referrals to the developmental specialist because a child refused to perform an item rather than could not do it or could not do the specific item required but could do others that measured similar functions. For example, it became important to have language items that indicated comprehension and expressive ability of the child rather than specific vocabulary or grammatical usage. The intent of other items had to be understood by staff rather than the specific example, e.g., if a one-year-old did not play "patty cake" but played another nursery game involving memory and imitation of the 'teacher' this satisfied the intent of the item.

Two social work students were given their field placement at the Gun Hill Child Health Station during the initial effort in this program of developmental screening. They were supervised

by a social worker from the Mayor's Office on Mental Retardation. These students not only developed a caseload from the children and families seen, but explored the community resources available for diagnosis, treatment, and family support services as well. The Mayor's Office also helped in the establishment of a direct referral linkage between the Gun Hill Child Health Station and the Kennedy Center.

After experience screening approximately 3000 children at Gun Hill, approximately 200 were referred within the Child Health Station for further developmental assessment. Of these, approximately 50 were considered to have definite developmental delays. Forty of these were referred for a further diagnostic work-up whic generally bore out suspicions of moderate to major developmental delays. Ten cases were referred to day care centers or other community service facilities without further diagnostic evaluation. The incidence of developmental delays seemed to be one in 60 children screened with an over-referral rate to the second level developmental screening of four to one.

The pilot effort then was extended to the Dyckman Pediatric Treatment Center, in the Marble Hill area of upper Manhattan. This neighborhood seemed characterized by a large Hispanic population recently immigrated to the United States from Santo Domingo, Cuba and other Spanish areas of the Caribbean. There was also still an Irish population and a white group of mixed

142<

ethnic background using the Dyckman clinic. Essentially, the same steps were taken to orient staff, establish a referral system within the clinic and to a developmental clinic at Columbia Presbyterian Medical Center. Videotape was ulitized as a teaching instrument for staff, providing direct feedback and also subject matter for group clinic meetings. A Spanish translation of the form was made. There was no special provision for social work help in this effort although the New York City Department of Health social worker assigned to the entire upper Manhattan area was used for referrals if an urgent situation was discovered. The rate of confirmed developmental pathology from this clinical effort averaged around 7% after approximately 1800 children were screened.

The Polo Grounds Pediatric Treatment Clinic in Central Harlem was the next site chosen, in a neighborhood of Harlem wit a relatively stable Black population, many of whom were first and second generation migrants from the South. There were two pediatric developmental clinics at Harlem Hospital used as referral resources. Again, the Department of Health social worker was utilized as well as the social workers available when a hospital referral was made. Approximately 1000 children were screened in this clinic with a 8-9% rate of developmental deviation. The corroborated pathology showed a greater number of children with organic neurological features in their developmental delays.

There are several efforts to inform and initiate a larger group of city employed physicians into using the Developmental Progress Chart which had evolved as the developmental screening instrument. Reception has been very mixed. The major resistance seemed to center around the physicians not being fluent in the patient's language, their feeling pressured about the time involved in doing this type of assessment and many also questioned the greater effectiveness of this type of assessment over the look-and-see type of appraisal that they felt experienced pediatricians were capable of. The Division of Day Care incorporated this screening into their pediatric examinations but many of the physicians did not actually utilize the instrument after a single mass training session. There was no supervisory mechanism to reinforce the training. The doctors at Polo Grounds Pediatric Treatment Clinic did not continue to ulitize the instrument consistently after the pilot effort had ended at their clinic and the developmental specialist was no longer visiting the clinic consistently.

The summary of this experience was that a screening instrument had been piloted which showed great potential usefulness. There was a higher rate of developmental delays diagnosed utilizing this instrument than the former historical method. There was close corroboration of suspected pathology referred to the diagnostic centers by the second level developmental screener and

the pathology that the centers confirmed. The resistances of primary staff to utilizing the instrument necessitated a second level of personnel to oversee this effort before children could be directly referred out to a diagnostic center. Also, the social work component which was originally present in the pilot effort was most helpful to the families involved and facilitated the interagency connections that needed to be made.

All of this experience was behind the choice of the pilot effort chosen for this EPSDT project. The decision to train bilingual paraprofessionals to do the primary screening and the utilization of the pediatric staff to do the second level screenin was the next variation chosen. The introduction of a trained social worker seemed very worthwhile not only because of what services they would bring to the project caseload of families and the training of the primary screeners but because the Deaprtment of Health no longer had social work staff in the field due to fiscal cuts.

The Training of the Paraprofessional Screeners

The primary screen in the two-tier system was conducted by a bilingual paraprofessional who received extensive training in the use of the Developmental Progress Chart.and in relating to children and their parents. The training of the paraprofessional consisted of two weeks of in-office training conducted by the director of the New York City Department of Health's Bureau of Child Health.

1.15<

She presented videotapes of actual developmental screenings and slides concerning child development. She then explicated every item on the Developmental Progress Chart, using the Manual for Developmental Screeners and Physicians as the basis for discussion. The process was slow and detailed, because each test item was more difficult to explain than the trainers had anticipated. For each test item, the following aspects had to be clarified:

1. What behavior was actually to be observed and in the context of what kind of developmental progress;
2. The limits of acceptability, i.e., what constituted a "pass" on the item;
3. How the Screener was to elicit the behavior, e.g., what materials could be used, what were the limits in coaxing the child to perform etc.;
4. To what extent could the mother be involved in eliciting the behavior; and
5. Whether or not the response could be obtained by history, i.e., by asking the mother if the child usually could perform the activity being tested.

These five aspects were reviewed repeatedly during the demonstration by supervisors working with the Developmental Screeners.

This period in the Project Central office was followed by several days of close observation of the paraprofessionals screening children in the control clinic (Melrose). The proce-

1.15<

dure was as follows: the two paraprofessionals, the Director of the Bureau of Child Health and one or both of the Project Coordinators sat in a separate room of that child health station. Children were referred to the room at random. The paraprofessionals alternated screening the children. Their task was to explain the purpose of the screening to the parent and to test the child while the others looked on. (In many ways this was more challenging than the regular assignment, since the presence of so many extraneous people added immeasurably to the parent's, child's, and screener's tension. Nevertheless, it was felt the screener's could not be assigned to work independently without this kind of prior scrutiny. After each family left the room, the screener would state how he scored the child on the Developmental Progress Chart. Everyone then revealed their own judgments and any discrepancies were resolved by the Director of the Bureau of Child Health. Although many items had to be reinterpreted to the paraprofessionals, and the introduction to the parents had to be improved, there were no gross misconceptions or errors in conducting or judging the screening device. Following the observation period, the paraprofessionals started to work at their separate child health station locations.

The Screening Encounter

In the two-tier system, the paraprofessional greeted the mother and child in the waiting room and ushered them into an area set aside for developmental assessment. The screener tried to establish good rapport with the parent, and allay

117

any fears or misconceptions she might have had with regard to the screening. He explained that he simply wanted to watch the child perform a few activities, which would give him an idea of how well the child was growing. The mother would be encouraged to participate in some of the activities and to answer a few questions about the child.

The DPC was divided into five developmental categories: Motor, adaptive, language, psycho-social, and parental (see Appendix B). It was designed to test children between the ages of one month and six years. Twelve intervals were established across that range. Tasks were designated at each interval in all five categories. These were tasks that 75 to 90 percent of the population was expected to do by that time. For example, 75 to 90 percent of all 11 to 14 month olds were expected to be able to "walk holding on."

In administering the test, the screener began with the item at the child's chronological age. If the child succeeded, the screener gave him consecutively more difficult items until he failed one. However, if the child failed the task at his chronological age, he was given consecutively easier items on the chart until he passed. This procedure was used across all five categories.

Wherever possible, the screeners used direct observation as evidence of the child's accomplishments. If the child failed to demonstrate an activity in the presence of

the developmental screener (e.g., because it was felt that he was unwilling, rather than unable), parental reports generally served as sufficient evidence. However, when the screener had reason to doubt the parental report, it was not accepted as evidence and the child was considered to have failed the item.

Passing the screen was defined as the ability to perform at chronological age level in all five categories. In such instances, the clinician was not required to use the DPC in his own screening. Failing the screen was defined as inability to perform at chronological age level in one or more categories. Since most children were expected to pass all chronological age level items, a single failure suggested that further exploration was called for. In all cases of failure, the child was formally re-screened with the DPC. The clinician followed the same procedure as the screener in administering it.

In the one-tier system, the child was screened only by a clinician. The clinician used the DPC with all children, and followed the same procedure as the screener in administering it.

In both the one and two-tier systems, upon completing his screen, the clinician decided what to do next. In two-tier, if the clinician's results contradicted the screener's, the clinician's decision was final. If he judged the child as normal, no further action was required. If he judged the child as abnormal, one of the following recommendations were made:

1. More frequent visits to the CHS to monitor the child's progress.
2. The scheduling of a re-screen at the CHS at some specified date in the near future.
3. Referral to the project MSW for family counseling.
4. Referral to an outside clinic for a complete, developmental diagnosis.
5. Other

Referrals for diagnosis were of special interest in this study. The two-tier developmental screening procedure was expected to generate more referrals than the one-tier. But more importantly, it was also anticipated that a high percentage of those referred problems would be confirmed by diagnosis. Both (a) number of confirmed developmental problems and (b) rate of confirmed problems per referral in one vs. two-tier screening were the critical measures.

The Role of the Medical Social Worker

The second new employee added to the developmental assessment team was a medical social worker (MSW). The primary function of the MSW was to follow-up on referrals for diagnosis resulting from developmental screens. She also engaged in family counselling with clients referred to her for that reason, and was one of several individuals to observe and supervise the developmental screeners.

The MSW's follow-up activities started upon completion of the developmental screen. If a clinician decided to refer a child to a diagnostic center, the MSW was notified immediately. The MSW contacted the family and scheduled a home visit. During the home visit, she discussed the child's case with the parents, and tried to allay any fears or misconceptions they might have had surrounding the referral. She sought to gain the parent's permission to arrange an appointment for the child at one of two diagnostic centers used in the study--either the Lincoln Medical and Mental Health Center or the Rose F. Kennedy Center for Research in Mental Retardation and Human Development. If the parents initially refused to grant this permission, the MSW persisted as long as there was a chance of persuading them. For families agreeing to participate who appeared skeptical and apprehensive, the MSW offerred to accompany them on their first visit to Lincoln or Kennedy.

A successful referral was defined as one in which the child

showed up for a first visit at one of the two diagnostic centers. In assessing the effectiveness of the MSW in her follow-up capacity, a rate of successful referrals was derived by dividing the number of successful referrals by the number of all referrals. Since the MSW's task was to get the family started at Lincoln or Kennedy as quickly as possible, another measure of her performance was the time interval between the date the referral was initially made and the child's first visit to a diagnostic center. These and other related data are reported in the results section.

Results

Description of the Developmenatl Assessment Sample

A total of 1196 children were screened for developmental lag-389 in the one-tier system and 807 in the two-tier system. Data were gathered on a number of demographic measures and presented in Tables 4-1 through 4-6. A frequency distribution of child's age reveals that far more children under twelve months of age were screened in the one-tier than in the two-tier condition. The reason for this discrepancy was that many of the clinicians in the one-tier condition did not speak Spanish, and were therefore unable to communicate with a sizable portion of the older children. As in the other samples in this study, the majority of the subjects were Hispanic (63.0% overall). 15.7 percent of the mothers spoke little or no English, 45.5% were native New Yorkers, and very few continued their education beyond high school(7.5%). Finally, 80 percent of the mothers were between the ages of 19 and 35. In summary, other than the age at which children were screened, both the one and two-tier samples were comparable in all other areas studied.

The Impact of the Paraprofessionals and the Two-Tier System

The paraprofessional screeners were inserted into the PTC's for four basic reasons: (a) to elicit an accurate developmental history from non-English-speaking mothers; (b)

to save doctors' time; (c) to highlight the importance of developmental assessment at the PTC's; and most importantly (d) to uncover more developmental disorders than were presently being detected in the one-tier developmental assessment system.

Both developmental screeners (at Mitchell and Tinton) were bilingual. This enabled them better than most of the PTC clinicians to elicit accurate developmental histories from mothers who spoke little or no English. Developmental history played an important part in the DPC. As seen in Table 4-7a, 70.6% items passed were based upon direct observation and 29.4 percent were based upon parental report. Thus, a modest number of pass-fail decisions were based upon verbal communication between parent and screener. Of the six clinicians servicing the three PTC's during the time of the project, only two were fluent in Spanish. This in itself is evidence that the screener's role on the developmental assessment team was integral.

Because of the large PTC caseload and his numerous other responsibilities, a clinician can ill afford to spend alot of time doing developmental assessment. With the addition of the paraprofessional screener, who was able to conduct a rigorous screen in 15 to 25 minutes, a good deal of physician's time was saved. When a developmental lag was detected by the screener, the clinician did a comprehensive secondary screen. But when none were found by the screener, he or she spent less time.

The addition of a paraprofessional screener and MSW to the PTC staff underscored the overall importance of developmental assessment. It apparently caused other PTC staff members to become active themselves in identifying and referring developmental problems. In fact, 8 of the 26 referrals to the Lincoln and Kennedy diagnostic centers were made independently of the formal two-tier screening mechanism. Perhaps the availability of an MSW as a follow-up agent prompted the PTC staff to refer known cases.

The success of the paraprofessionals as developmental screeners was measured in a number of ways. First, inter-screener reliability was tested by having the screeners jointly observe and rate 44 children. Each screener was blind as to the other's ratings. For half the children, one screener performed the developmental assessment test and rated the child, while the other screener stood off by the side and also rated the child. For the other half, they reversed roles.

Inter-screener reliability was assessed using two sets of criteria. The more stringent one involved treating each of the possible responses to an item (i.e., fail, observed pass, and parental pass) as independent. If one screener rated an item as anything other than the identical response given by the other, it was counted as a disagreement. With the less stringent criterion, observed pass and parental pass were combined so that only two categories of response were considered--pass and fail. In both situations, if one screener

recorded an outcome for an item while the other showed no entry for the item, it was counted as a disagreement. As can be seen in Table 4-8, percentage agreement between the two screeners was quite high ranging from 78 percent to 100 percent using the three-response criterion and from 85 percent to 100 percent using the two-response criterion. Thus, the evidence suggests that the paraprofessionals used the same standards in screening the children.

The amount of agreement between paraprofessional and clinician was another measure of the paraprofessional's performance as a screener. Of the 880 total children screened in the two-tier system, there were only two cases of false negatives (i.e., cases where the clinician detected a lag when the paraprofessional had not). This suggests that the paraprofessionals were careful and responsible as screeners; only two cases judged as problems by clinicians slipped by unnoticed. In summary, the paraprofessionals served successfully in their capacity as developmental screeners. The evidence indicates that with the kind and amount of training and supervision provided in this project, the screener's job can be handled by paraprofessional-level employees. From a cost effectiveness standpoint, this is an encouraging finding.

Developmental Lags

The two-tier system was expected to uncover developmental lags at a higher rate than the one-tier system. As seen in

156<

Table 4-9, the hypothesis was easily supported. Developmental lags were uncovered at a rate of 1.01 percent in the one-tier and 4.28 percent in the two-tier system.

Referrals for Diagnosis

It was predicted that the two-tier system would generate more referrals than the one-tier system. As seen in Table 4-10, 17 diagnostic referrals resulted from the two-tier and only one from the one-tier system. Thus, the hypothesis was convincingly supported. We sought to confirm the appropriateness of these referrals by examining all available diagnostic evaluations provided by the Lincoln and Kennedy centers. All 14 evaluations examined to date did, in fact, support the judgment that the referral was warranted.

The MSW

A successful MSW referral was defined as one in which the child showed up for a first visit at a diagnostic center. Of the MSW's cases, all but one were successful.

For 15 of the MSW's cases, data are available on the time interval between problem identification at the PTC and the child's first appointment at a diagnostic center. As seen in Table 4-11, 80 percent of those intervals were 75 days and less. Hence, most of the referrals generated had reached their intended destination well within three months.

Summary

It was hypothesized that a two-tier developmental asessment team, which included a paraprofessional and clinician as screeners, would be more effective than a one-tier system, which included a clinician only. The prediction was dramatically supported by the data. 17 children in the two-tier condition vs only one in the one-tier condition were referred to a diagnostic center for a developmentally-related problem uncovered through the screening process. And of the 14 cases where the diagnostic outcome was known, all were confirmed as conditions warranting attention and care.

The MSW played an integral role in the referral process by speedily setting up diagnostic appointments for families in her caseload. Both her presence and that of the paraprofessional served to sensitize the regular PTC staff to the urgency for screening, diagnosing, and treating preschool children for developmental disorders. The fact that the MSW took on 8 cases not generated through the formal screening system but rather on the recommendations of other staff members, supports the above contention.

The two paraprofessionals served well in their roles as developmental screeners. They were expertly trained and supervised, and became quite adept at administering the Developmental Progress Chart. Inter-screener reliability

was quite high, and there were only two cases of false negatives out of 880.

Overall both the paraprofessional screeners and the MSW proved to be valuable additions to the PTC's.

Table 4-1 : Child's Age—Developmental Assessment Sample

	One-Tier System	Two-Tier System			Overall
	(Melrose)	Tinton	Mitchell	Total	Total
0 - 6 months	(191) 49.1%	(91) 23.0%	(48) 11.7%	(139) 17.2%	(330) 27.6%
6 - 12 months	(64) 16.5%	(65) 16.4%	(49) 11.9%	(114) 14.1%	(178) 14.9%
1 - 2 years	(55) 14.1%	(69) 17.4%	(83) 20.2%	(152) 18.8%	(207) 17.3%
2 - 3 years	(29) 7.5%	(55) 13.9%	(68) 16.5%	(123) 15.3%	(152) 12.7%
3 - 4 years	(23) 5.9%	(31) 7.8%	(74) 18.0%	(105) 13.0%	(128) 10.7%
4 - 5 years	(21) 5.4%	(55) 13.9%	(69) 16.8%	(124) 15.4%	(145) 12.1%
Over 5 years	(6) 1.5%	(30) 7.6%	(20) 4.9%	(50) 6.2%	(56) 4.7%
Total	(389) 100.0%	(396) 100.0%	(411) 100.0%	(807) 100.0%	(1196) 100.0%

Table 4-2: Mother's Language—Developmental Assessment Sample

	One-Tier System	Two-Tier System			Overa
	(Melrose)	Tinton	Mitchell	Total	Tot
English Only	(176) 46.9%	(127) 36.9%	(137) 34.4%	(264) 35.6%	(440) 39.4%
Spanish & English	(136) 36.3%	(172) 50.0%	(191) 48.0%	(363) 48.9%	(499) 44.7%
Spanish Only	(61) 16.3%	(45) 13.1%	(70) 17.6%	(115) 15.5%	(176) 15.7%
Other	(2) 0.5%				(2) 0.2%
Total	(375) 100.0%	(344) 100.0%	(398) 100.0%	(742) 100.0%	(1117) 100.0%

Table 4-3: Mother's Years of Residency in New York City

Developmental Assessment Sample

	One-Tier System	Two-Tier System			Overall
	(Melrose)	Tinton	Mitchell	Total	Total
0 - 5	(55) 15.4%	(46) 11.5%	(36) 10.6%	(82) 11.1%	(137) 12.5%
6 - 10	(60) 16.9%	(75) 18.8%	(55) 16.1%	(130) 17.5%	(190) 17.3%
11 - 15	(33) 9.3%	(45) 11.2%	(45) 13.2%	(90) 12.2%	(123) 11.2%
Over 15	(36) 10.1%	(47) 11.7%	(65) 19.1%	(112) 15.1%	(148) 13.5%
Born in NYC	(172) 48.3%	(187) 46.8%	(140) 41.0%	(327) 44.1%	(499) 45.5%
Total	(356) 100.0%	(400) 100.0%	(341) 100.0%	(741) 100.0%	(1097) 100.0%

Table 4-4: Mother's Education--Developmental Assessment Sample

	One-Tier System	Two-Tier System			Overall
	(Melrose)	Tinton	Mitchell	Total	Total
0 - 5	(11) 3.5%	(32) 9.4%	(16) 5.0%	(48) 7.3%	(59) 6.1%
6 - 7	(12) 3.9%	(26) 7.6%	(26) 8.2%	(52) 7.9%	(64) 6.6%
8 - 11	(134) 43.2%	(138) 40.6%	(172) 54.1%	(310) 47.1%	(444) 45.9%
12	(115) 37.1%	(124) 36.5%	(89) 28.0%	(213) 32.4%	(328) 33.9%
Over 12	(38) 12.3%	(20) 5.9%	(15) 4.7%	(35) 5.3%	(73) 7.5%
Total	(310) 100.0%	(340) 100.0%	(318) 100.0%	(658) 100.0%	(968) 100.0%

Table 4-5: Mother's Ethnicity—Developmental Assessment Sample

	One-Tier System	Two-Tier System			Overall
	(Melrose)	Tinton	Mitchell	Total	Total
Black	(141) 37.1%	(132) 35.2%	(108) 26.4%	(240) 30.6%	(381) 32.7%
White	(5) 1.3%	(6) 1.6%	(3) 0.7%	(9) 1.1%	(14) 1.2%
Hispanic	(223) 58.7%	(221) 58.9%	(289) 70.7%	(510) 65.1%	(733) 63.0%
Other	(11) 2.9%	(16) 4.3%	(9) 2.2%	(25) 3.2%	(36) 3.1%
Total	(380) 100.0%	(375) 100.0%	(409) 100.0%	(784) 100.0%	(1164) 100.0%

Table 4-6 : Mother's Age—Developmental Assessment Sample

	One-Tier System	Two-Tier System			Overall
	(Melrose)	Tinton	Mitchell	Total	Total
Under 19	(37) 9.7%	(29) 7.8%	(45) 11.0%	(74) 9.5%	(111 9.6
19 - 22	(96) 25.1%	(76) 20.5%	(90) 22.0%	(166) 21.3%	(262 22.6
23 - 26	(92) 24.1%	(89) 24.1%	(75) 18.3%	(164) 21.1%	(25 22.
27 - 30	(89) 23.3%	(65) 17.6%	(69) 16.9%	(134) 17.2%	(22 19.
31 - 35	(42) 11.0%	(65) 17.6%	(65) 15.9%	(130) 16.7%	(17 14.
Over 35	(26) 6.8%	(46) 12.4%	(65) 15.9%	(111) 14.2%	(13 11.
Total	(382) 100.0%	(370) 100.0%	(409) 100.0%	(779) 100.0%	(1 10

Table 4-7a: Frequency Distribution of Items Passed by Direct Observation vs. Parental Report

Overall Two-Tier Sample

Developmental Category	Direct Observation	Parental Report	Total Items Passed
Motor	(1503) 88.1%	(203) 11.9%	(1706) 100.0%
Adaptive	(1494) 98.8%	(18) 1.2%	(1512) 100.0%
Language	(1065) 72.9%	(396) 27.1%	(1461) 100.0%
Psycho-Social	(434) 23.7%	(1394) 76.3%	(1828) 100.0%
Parental	(703) 32.0%	(154) 18.0%	(857) 100.0%
Total	(5199) 70.6%	(2165) 29.4%	(7364) 100.0%

Table 4-7b: Frequency Distribution of Items Passed by Direct Observation vs. Parental Report

Tinton

Developmental Category	Direct Observation	Parental Report	Total Items Passed
Motor	(749)	(87)	(836)
	89.6%	10.4%	100.0%
Adaptive	(703)	(6)	(709)
	99.2%	0.8%	100.0%
Language	(451)	(247)	(698)
	64.6%	35.4%	100.0%
Psycho-Social	(260)	(623)	(883)
	29.4%	70.6%	100.0%
Parental	(429)	(1)	(430)
	99.8%	0.2%	100.0%
Total	(2592)	(964)	(3556)
	72.9%	27.1%	100.0%

Table 4-7c: Frequency Distribution of Items Passed by Direct Observation vs. Parental Report

Mitchell

Developmental Category	Direct Observation	Parental Report	Total Items Passed
Motor	(754)	(116)	(870)
	86.7%	13.3%	100.0%
Adaptive	(791)	(12)	(803)
	98.5%	1.5%	100.0%
Language	(614)	(149)	(763)
	80.5%	19.5%	100.0%
Psycho-Social	(174)	(771)	(945)
	18.4%	81.6%	100.0%
Parental	(274)	(153)	(427)
	64.2%	35.8%	100.0%
Total	(2607)	(1201)	(3808)
	68.5%	31.5%	100.0%

Table 4-8: Inter-Screener Reliability: Mean Percentage Agreement Between the Two Paraprofessional Screeners

Developmental Category	3 Category Criterion[1]	2 Category Criterion[2]
Motor	89.3	92.4
Adaptive	89.3	89.3
Language	78.0	85.4
Psycho-Social	82.3	89.2
Parental	100.0	100.0
Total Mean	87.78	91.26

N = 44

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[1] Observed pass, parental pass, and fail were counted as separate categories.

[2] Observed pass and parental pass were combined to form a single category, while fail represented the second category.

Table 4-9: Rate at which Developmental Lags were Uncovered in the One and Two-Tier Systems

Screening System	Number of Children Screened	Developmental Lags Uncovered
One-Tier	496	(5) 1.0%
Two-Tier	888	(38)* 4.3%

* 38 represents the number of lags identified by the clinician in the two-tier system.

Table 4-10: Comparison of Referrals for Diagnosis Between the One and Two-Tier Screening Systems[1]

	One-Tier	Two-Tier	Total
Number Screened	496	888	1384
Number of Referrals	1	17	18
Referral Rate per Screen	0.2%	1.9%	1.3%

[1] All referrals presented in this table resulted from a formal screen conducted within either the one or two-tier system. Eight other developmental referrals not resulting from a formal screen were initiated during the project period and handed over to the project MSW.

Table 4-11: Time Interval Between Problem Identification and First Diagnostic Appointment for Developmental Referrals[1]

# of Days	Frequency
0 - 25	4
26 - 50	2
51 - 75	6
Over 75	3

N = 15

Mean = 56.3

[1] Missing data for 11 cases

APPENDIX A

NEW YORK CITY DEPARTMENT OF HEALTH GUIDELINES FOR EPSDT

NEW YORK CITY DEPARTMENT OF HEALTH GUIDELINES FOR EARLY AND PERIODIC SCREENING, DIAGNOSIS AND TREATMENT (EPSDT) IN CHILD HEALTH STATIONS AND PEDIATRIC TREATMENT CLINICS.

BUREAU OF CHILD HEALTH
MARCH 1974

TABLE OF CONTENTS

Pages

Objectives and General Description 1 - 2

Recording of "EPSDT Completed" examination 18

Summary of Routine EPSDT Procedures and Visit Schedule 19

I. Physical Examination 2
  Dental Screening 3
  Recording physical examination 3

II. Physical Measurements 4
  Growth Charts 4

III. Assessment of Nutritional Status 4

IV. Developmental Screening 4

V. Immunizations and Tuberculin Testing 5

VI. Treatment, Referral, and Follow-up 5
  Use of Social Service Intervention 5 - 6

VII. Hematology Screening Tests 6
  General description and Forms 6
  A. Micro Lead Screening Test 7
    Follow-up of Micro Test Results .04 thru .06 & above 7 - 8

  B. Hemoglobin Electrophoresis and Hematocrit 9
    Guide to interpretation of Hematocrit 9
    Guide to interpretation of hemoglobin 9 - 10
    Recording of hematology results 11
    Storage and delivery and supplies 11

VIII. Screening Urinalysis 11 - 12

IX. Vision Screening 12 - 14
  Criteria for Referral 13
X. Audiometric Screening 14
  Sweep Test (Pure Tone) 15 - 16
  Threshold Test (Pure Tone) 16 - 17
  Role of Supervising Audiologists 15 - 18

XI. Statistics - Recording 18

BUREAU OF CHILD HEALTH
March 1974

NEW YORK CITY DEPARTMENT OF HEALTH
GUIDELINES FOR EARLY AND PERIODIC SCREENING, DIAGNOSIS AND TREATMENT (EPSDT)
PROGRAM IN CHILD HEALTH STATIONS AND PEDIATRICT TREATMENT CLINICS

These definitive guidelines outline the content and implementation of the Early and Periodic Screening Program (EPSDT) for the New York City Department of Health Child Health Stations and Pediatric Treatment Clinics. They are to be considered as a supplement to the existing "Manual of Procedures for the Child Health Conference."

An important aspect of the EPSDT Program is the systematic referral by the Department of Social Services of children of families on Public Assistance, many of whom will have had inadequate or incomplete previous preventive health care. All such children are to be registered in the Child Health Stations and Pediatric Treatment Clinics for continued care, even after the initial EPSDT examination is completed.

The EPSDT Program includes certain tests and procedures already being carried out in Child Health Stations, plus additional ones that are being done for the first time. The total EPSDT Program includes:

> assessments of physical growth and mental development; a physical examination, including dental screening; assessment of nutritional status; vision and hearing screening tests; hematology screening for anemia, lead poisoning and hemoglobinopathies including sickle cell disease; urine screening; immunizations and tuberculin testing; diagnosis, treatment and follow-up on any abnormalities.

Although the EPSDT Program is mandated by federal law for Medicaid recipients, all tests and procedures in these guidelines will apply to all children seen according to age, regardless of their Medicaid status.

The periodicity of EPSDT examinations for the individual child is determined by his age and coincides with the visit schedule for preventive health care (See XI, page 18 and summary on page 19).

All procedures and tests required for any given age should be done at the same visit as the physical examination or as soon thereafter as feasible. This visit including procedures and tests will be designated a complete EPSDT visit for Medicaid accounting purposes.

Children 3 years of age and over, on whom the most time consuming tests are required, should be carefully scheduled during a session so that staff will have time to complete all scheduled procedures. The hematology tests and immunizations on this group should be done after the vision and audiometric screening is completed, since the child's cooperation is essential for the latter two procedures.

Certain aspects of the program, such as tests and procedures that are being done for the first time in child health require specialized training, e.g., hematology testing, audiometric and certain vision screening procedures. At least one person in each Child Health Station and Pediatric Treatment Clinic has been trained in all of these new procedures. Additional training courses will be required to provide more back-up in the future, and these will be planned as necessary.

Close supervision of this program is essential to ensure highly accurate test results in all areas. For this purpose, in addition to the supervision provided by Supervising Child Health Physicians and Supervising Public Health Nurses, certain highly specialized supervisory services are required. Supervising Audiologists have been hired by the Bureau of Handicapped Children to supervise the hearing screening program. Each supervising audiologist is assigned to several clinics.

Whenever an infant or preschooler has had a test or procedure elsewhere that is required under the EPSDT Program, the particular test/procedure need not be repeated provided the test results are known, are within normal range and are recorded on the Child's History Record (Form 3K) in the appropriate place.

Permission to perform blood tests and screening procedures must be obtained from either the parent or legal guardian. In Child Health Stations there is a stamp containing the permission form which should be stamped in the lower right-h corner of the inside back page of the 3K. In Pediatric Treatment Clinics the cons form is on a separate piece of paper which must be kept in the child's record. Both types of consent forms must be signed, dated, and witnessed prior to offering the appropriate services. Whenever an individual child cannot have a blood test because consent is lacking, this should be noted on page 3 of the 3K, by date and type of test(s) not done, and the reason for not doing it (them).

Auditing of Child Health Station and Pediatric Treatment Clinic records for compl with EPSDT guidelines will be conducted by the Bureau of Child Health, as well as interested outside agencies, on a regular basis.

DETAILED DESCRIPTIONS OF EPSDT PROCEDURES AND TESTS

I. COMPLETE PHYSICAL EXAMINATION - A complete physical examination is to be done by the physician or the PNA at every visit. An adequate medical examination must include an overall inspection of the child and must, therefore, be done with the child completely undressed. A general appraisal should be made of the child's nutritional status, posture, and gait if he ambulatory. The physician's impression regarding the child's development must be confirmed by plotting his height and weight on the growth chart. A visit where this is not done is considered inadequate. All infants 1 year of age and younger should have their head circumference measured also and recorded in the height and weight column on the 3K1. The anterior fontanelle size should be noted if still open. The eyes should be examined as well as the nasopharynx. An otoscopic examination must be done on all children. Auscultation of the heart and lungs should be done as well as inspection of the chest wall. Palpation of the abdomen and notation of any organomegaly should be made. An examination of the genitalia should always be done. An inspection of the limbs should be made and the hips must be carefully examined in all babies.

Screening dental examinations will be done either by the physician or PNA, or where available, a dental hygienist. These are to include: (a) soft tissue inspections - the condition of soft tissues should be assessed; palpation for lymphadenopathy should accompany the general inspection of the tongue, lips, fauces and membranes for lesions, color, contour, texture and mobility. (b) oral hygiene-cleanliness of oral cavity and adequacy of tooth brushing technique should be assessed; existence of breath odors should be noted. (c) inspection of the teeth; abnormalities of morphology and eruption patterns should be noted; obvious gross or early decay, malalignment and discoloration also noted. When done by the physician or PNA, a notation must be made in the note that a dental examination was, in fact, done. THIS IS NOT OPTIONAL. This notation may be as brief as "dental negative" or "teeth in good repair" but there must be some mention of dental screening for an examination to be counted as an EPSDT examination.

Following his examination the physician or PNA will record findings on Form 3KI. Since Child Health Station records are usually the only health records these children have, this note must be (1) legible, (2) complete and (3) indicate the plan for that day, e.g., immunizations, vision screening and any future plans. The physician's note must include the following items for all well visits, including EPSDT visits:

(1) Interim health history
(2) A history of recent developmental milestones and newly acquired skills noted on back of Child's History Record (Form 3K) and any problems explained in the note.
(3) Statement of the child's general appearance. For example: "Husky well developed toddler."
(4) A brief account of the child's diet. For example: type and quantity of formula, milk, solids, etc.
(5) Results of physical examination as in the following example:
    "Head - AF closed
    EENT - Negative
    Mouth - Teeth in good repair
    Neck - No adenopathy
    Lungs - Clear
    Heart - RSR No Murmur
    Abd - Soft - No masses or organomelgaly
    Genitalia - Normal male infant
    Hips - Normal, no dislocation (infants)
    Ext. - Full ROM (older children)
    Skin - Clear"
(6) A diagnosis or impression. For example: Impression: Well baby. Plan: Tine test today, RV 3 mos. for measles immunization.
(7) Signature of Physician or PNA-include first and last names in full, no initials.

The above is an example of how a note might be written and is meant to serve as a guide. Less than the above would be so brief as to be meaningless, is unacceptable to the Bureau and does not come up to EPSDT program standards.

II. PHYSICAL MEASUREMENTS - Measurements of height and weight, and head circumference on infants up to 1 year of age are to be done routinely at the time of all routine physical examinations. Prematures and all infants and children beyond 1 year of age with abnormal configuration of the head and/or cranial sutures are to have head circumference measurements taken past 1 year of age for as long as the indication for doing so exists. All physical measurements are to be plotted on growth charts by the physician or PNA at the time of every physical examination. THIS IS NOT OPTIONAL, BUT IS A MANDATORY PART OF THE PHYSICAL EXAMINATION.

Growth charts and measuring tapes are provided as needed by the districts. The Supervising Public Health Nurse should estimate in advance the number she will require on a regular basis so that new supplies keep up with current needs. If a district runs low on growth charts a xeroxed growth chart is adequate.

III. ASSESSMENT OF NUTRITIONAL STATUS - Nutritional status is assessed by the findings and impressions gathered from: the physical examination; physical measurements especially incremental gains or failure to gain; growth charts; testing for anemia. Children having any detectable nutritional deficiency should be referred to the Public Health Nurse or the District Nutritionist for consultation.

IV. DEVELOPMENTAL SCREENING - At the time of the first visit the physician or PNA is to take a developmental history, covering significant developmental landmarks from birth. Thereafter, only an interim developmental history need be taken. The back of the Child's History Record (Form 3K) contains a check-off list of significant developmental landmarks for screening purposes. It is to be filled out as indicated with either the age of the child or the date when each landmark was reached. Certain Child Health Stations that are part of a special developmental study use special forms for this purpose. One of the above two forms must be filled out by the physician or PNA at the time of each routine physical examination.

Whenever a question arises in an individual child as to developmental lags, the Denver Developmental Screening Test (DDST) or other more complete screenin test should be used. All screening test forms used must be identified with the full name of the child, date of birth and date of the test. They must always become a permanent part of the child's medical record.

Children with questionable or definite abnormalities in development should be referred for definitive work-up. However, mothers should always be carefully questioned concerning possible previous work-up for a developmental problem and where this has already been done, a report from the treatment agency should usually be requested prior to making a decision on referral.

V. IMMUNIZATIONS AND TUBERCULIN TESTING

The most recently revised Bureau of Child Health schedule of immunizations is contained on the "Summary Sheet for Routine EPSDT Procedures" on page 19 of these guidelines. Many children being referred to the Child Health Stations for the EPSDT examination will be inadequately immunized for their age, or even have had no previous immunizations. It is imperative that an immunization plan be individualized for such children. It shou be noted that DPT, polio and measles-rubella immunizations can all be given simultaneously to such children without sacrificing antibody response to any of the individual antigens. Moreover, the interval between return appointment in such children must be individualized to allow for "catch-up" of missed immunizations and procedures. Tuberculin tests must be read and recorded in the medical record for completion of the EPSDT examination.

VI. TREATMENT, REFERRAL AND FOLLOW-UP

In all Child Health Stations treatment of minor abnormalities, especially those that do not require definitive diagnosis is strongly encouraged. In the Pediatric Treatment Clinics diagnosis and treatment is to be done in accordance with specific guidelines and procedures issued to such clinics.

All children with any abnormality that requires diagnosis and/or treatment that is beyond the scope of the Child Health Station or Pediatric Treatment Clinic will be referred in accordance with present referral procedures. Referrals to "Bureau for Handicapped Children Approved Centers" or other Department of Health Clinics (e.g., Cardiac Consultation Clinic) where appropriate, is to be preferred. Reimbursement for the treatment of certain complex conditions in children eligible for Medicaid will be made only to hospitals with services approved by the New York City Department of Health, Bureau for Handicapped Children. These diagnostic categories ("restricted diagnosis") are:

Amputee
Cardiac
Cleft Palate
Cystic Fibrosis
Impaired Hearing
Phenylketonuria

Always consult the most recently published list of approved centers which lists all covered diagnoses, distributed to all clinics by the Bureau for Handicapped Children. All referrals must always be accompanied by the appropriate form. Standard follow-up procedures must always be followed.

It is anticipated that many families, especially from the group on Public Assistance referred to the Child Health Stations will require social service intervention. The district social service consultant can be contacted and/or the patient referred for the following types of services:

a. Direct short-term casework services to assist with problems of housing, employment, day care, legal aid, etc.
b. Diagnostic and supportive service to identify children with emotional problems and help parents to use available mental health services. Problems of mental retardation and physical handicaps also call for social work assistance in treatment planning.
c. Casework services to families where child abuse is suspected or determined.

ADDENDUM TO pp.5., VI. TREATMENT, REFERRAL AND FOLLOW-UP.

Omit sentence that follows section VI.e. on page 6 which states "Routine follow-up procedures as outlined in the Child Health Manual are to be followed in all cases".

f. The EPSDT Program requires that routine follow-up procedures be instituted and carried out on all children, including those who lapse appointments at any age - both routine return visit appointments, as well as appointments for any of the tests and/or procedures needed to complete the EPSDT screening.

The public health nurse must review records and make decisions as to types of follow-up most appropriate in each situation e.g. telephone call, letter and/or home visit. Whenever a home visit for follow-up is requested and the professional expertise of a public health nurse is not required, the request is referred to outreach for home visit. This procedure applies also to children who lapse appointment at any age.

In the case of elevated lead tests the follow-up procedures as outlined in this guideline on page 8. are to be followed.

In the case of other abnormal laboratory tests or where 12S's were not returned, or where problems exist, the physician and public health nurse are to jointly confer and decide on which follow-up is most appropriate in each case, e.g. telephone call, mail appointment or home visit. The public health nurse may refer a home visit to outreach worker on cases that in her judgement do not require the professional expertise of a public health nurse on the home visit.

Notation on the date the home visit was made, by whom, and the outcome must always be entered chronologically in the Child's History Record (Form 3K).

Outreach assigned from District Office - Outreach returns home visit report form to District Nursing Office. Report form is sent to the Child Health Station where notation of the results of the home visit are to be made in Child's History Record (Form 3K) as above.

Outreach Assigned directly from Child Health Station - home visit report form is to be returned to the Child Health Station by outreach worker. Notation of results of the home visit are to be made by child health station staff in Child's History Record (Form 3K) as above.

TERMINATIONS.

It may become necessary to terminate records if family has failed to return child for regular health supervision following telephone call, letter and home visits.

When family is known to Department of Welfare, the case worker should be notified about continuous lapsed appointments, and need for return to health supervision.

After all efforts have failed to return child to active health supervision the child health records are to be referred to Child Health physician and/or Supervising Physician for decision to terminate for non-attendance. Where problems exist with family or child there should be further follow-up by the public health nurse after termination. (PHN Home Visit)

d. Follow-up, outreach and home visiting in situations where parental resistance to medical recommendations is manifest. Casework services may be needed in response to problems of marital conflict, alcohol and drug abuse, mental illness and physical impairments in the family.

e. On a selective basis, parents who may need help in understanding children and coping more competently with stresses in child-rearing may be invited to participate in a small group parent education process based in the Health Center or local community facility.

Routine follow-up procedures as outlined in the Child Health Manual are to be followed in all cases.

VII. HEMATOLOGY SCREENING TESTS

FORMS

Request forms will be filled out by the PHA or clerk. Permission forms will be filed in the medical record in the Pediatric Treatment Centers and the permission stamp will be used in the Child Health Stations as already explained (See Page 2.).

The request form entitled "New York State and New York City Department of Health Sickle Cell Program" will be used for the micro lead screening test, the electrophoresis and hematocrit test.

Fill out forms so that all copies are legible. The name of the Child Health Station or Pediatric Treatment Clinic must be STAMPED on all copies. Fill out a separate form for the micro lead screening and one for the hematocrit and hemoglobin electrophoresis test. When a hematocrit test (and not the hemoglobin electrophoresis) is requested, tear off the top (white) sheet of the requisition slip and place it at the back of the 4 or 5 part form. Discard top carbon and wrap the tube as below.

Write the child's name on the plastic tape attached to the central portion of the cover of the petri dish used for the lead test. Affix a label containing the patient's name to a test tube which will be used as a container for the capillary tubes.

After collecting the specimens, wrap one of the completed forms around the test tube and hold in place by means of a rubber band.

The forms used to identify the micro lead test specimens need not be affixed to the petri dish. They will be matched up in the laboratory.

The petri dishes and the test tubes should be placed in different envelopes for shipment to the laboratory.

A. MICRO LEAD SCREENING TEST

The technician's own hands must be thoroughly washed and cleansed before handling the equipment.

Use a sterile gauze pad to wash patient's finger with a solution containing 2 percent citric acid in 70% alcohol. With a wood applicator apply a thin coat of collodian. After the collodion has dried, use a sterile disposable lance to puncture the finger. The purpose of the citric acid is to chemically bind any contaminating lead which may be present on the finger tip. The collodion prevents contamination by forming a seal between blood and skin. NONE OF THESE STEPS MAY BE OMITTED.

The amount of blood obtained must be large enough to form a single spot having a diameter of at least 3/8 of an inch when touched to the filter paper. A total of 3 blood spots are required on the same piece of filter paper. The spots should be no further than 3/4 of an inch from the periphery of the paper. Every precaution should be taken to prevent contamination of the paper by dirt or dust. The technician should not touch the filter paper at any area to which blood will be applied. The filter paper containing the 3 blood spots is sealed in the petri dish in which it was received using the attached sealing tape.

Equipment and supplies must be protected at all times from contamination by dust, etc.

On all blood specimens taken, the Bureau of Laboratories performs a screening FEP (free erythrocyte porphyrin) test. The normal range for the FEP test is less than 160 mcg.%. There are only two conditions which give an elevated FEP result-elevated blood lead and iron deficiency anemia. If the FEP is elevated, the laboratory will automatically do a micro blood lead on the same specimen. If this is normal (below .04) then the child does not have elevated blood lead but might have iron deficiency anemia. The FEP test is a screening procedure, not a diagnostic test. It is possible, therefore, to have an elevated FEP with a normal blood lead and a normal hematocrit. Such a case does not require any follow-up. Micro lead test results of .04 and above are considered abnormal and warrant follow-up as specified below. Elevated micro lead tests, like elevated FEP tests are not to be considered definitive. They always require a confirmatory venous lead test, as specified below.

Children with micro lead tests of .05 and .04 should have a repeat micro lead test at the time of the next visit or within 3 months - whichever comes first. If the repeat micro test is in the same range, the child should have a venous sample drawn.

The laboratory will telephone and subsequently mail all micro lead test results of .06 or over to the District Supervising Nurse. The lab will mail to each Child Health Station all results on tests that are less than .06 and/or have an FEP only.

The following follow-up procedures will apply to all micro lead tests of .06 and above:

> The District Supervising Nurse will notify the Child Health Station immediately and a telephone call will be made to the parent where possible. The parent will be given an appointment for a venous lead test at the nearest available drawing point. If the parent cannot be reached by telephone, the District Supervising Nurse will contact the outreach supervisor who will assign the case to an outreach worker for a home visit within 24 hours. Again the parent will be given an appointment for a venous lead test at the nearest available drawing point.
>
> In Child Health Stations where there is an assigned outreach worker, the Public Health Nurse in the Child Health Station may assign that outreach worker directly instead of the above. In these stations the nurse will keep an updated list of children with micro leads of .06 and over with the status of follow-up.
>
> In all cases, the child is to have a venous test within 3 days of when the micro test was reported to the district by the lab.
>
> In some districts it may be possible to send a technician to the home with the outreach worker to take the venous lead.
>
> In all cases, the outreach supervisor must have an updated list of children with micro leads of .06 and over for whom appointments for venous leads were made, as well as the dates of these appointments and their outcome.
>
> When the appointment for the venous lead is not kept, the outreach supervisor must arrange for the venous test to be done within 24 hours of the broken appointment - either arranging a revisit by an outreach worker, sending a technician to the home or referring to the DSN for a home visit by a Public Health Nurse.

B. HEMOGLOBIN ELECTROPHORESIS AND HEMATOCRIT

If the blood flow from the initial puncture is adequate, take two full heparinized capillary tubes from each patient. Seal the tubes at one end only. If the blood flow is not adequate, a second finger puncture is indicated. However, for the electrophoresis and hematocrit the use of collodion is not required. Place capillary tubes in the labeled test tube and refrigerate.

Hematocrit values 33% and above in both infants and preschoolers are considered normal. Any infant or preschooler with an hematocrit below this level should be recalled and seen by the physician or PNA for a decision as to treatment and follow-up plan, or referral to a treatment agency. Mild uncomplicated iron deficiency anemia should as a rule be treated and followed-up in all Child Health Stations and Pediatric Treatment Clinics by either dispensing the medication or a prescription as follows:

> 4-6 mg elemental iron/Kg./day.Fer-in-sol contains 15 mg. iron/0.6cc. Thus for a 10Kg. (22 pounds) child 2cc/day or 0.6cc t.i.d. For a 20 Kg. (44 lb.) child 4cc/day or 1.2cc t.i.d.

In those clinics where Fer-in-sol is not routinely stocked the parent should be given a prescription.

The child should be given a return appointment to have a repeat hematocrit after one month of treatment. In Pediatric Treatment Clinics a smear, hemoglobin, and reticulocyte count should be done also after one month of treatment. An elevation in the reticulocyte count to 3-6% indicates adequate iron absorption. The parent should be instructed to bring the child back sooner if he does not tolerate the medication.

When reports of the repeat hematocrit are returned and the value still below 33% or indicate minimal response, the child should be recalled. If a physical examination at this time is normal, treatment should be continued and the hematocrit repeated in another 4 weeks. If at that time the hematocrit is normal discontinue the iron therapy and reche the hematocrit in 6 months. If, after 8 weeks of iron therapy, the hematocrit remains below 33%, the child should be referred to an outside treatment agency for complete evaluation.

The following is a guide to the interpretation and follow-up of hemoglobi electrophoresis results:

There are approximately 110 known variants of hemoglobin. Because of the complex structure of the hemoglobin molecule, innumerable variations not yet discovered are possible. The abnormalities originate in three different ways:

1. By the production of an abnormal protein molecule. Sickle and C hemoglobins(S and C)are examples.

2. By the reduction in the amount of normal protein produced. The Thalassemias are examples.

3. By a developmental anomalies. Fetal (F) hemoglobin persistence is an example.

Since these abnormalities are inherited an individual may receive them from both parents (homozygous) or from only one (heterozygous). A person homozygous for an abnormal hemoglobin (e.g., S-S) may exhibit profound clinical symptoms, while the heterozygous state (A-S) is usuall symptom free.

Screening procedures presently available at the Health Department laboratory can identify only those hemoglobin variants most commonly found.

Following is a list of those laboratory reports most likely to be encountered and a guide to their interpretation:***

Negative:	A report of negative (A-A hemoglobin) indicates that the individual is homozygous for normal adult hemoglobin. Moreover, he will never develop sickle or any other abnormal hemoglobin.
*AS:	Heterozygous for hemoglobin S. This is the sickle trait and is almost always asymptomatic.
*AC:	Heterozygous for hemoglobin C. Symptom free.
*AD:	Heterozygous for hemoglobin D. Symptom free.
**AF:	Heterozygous for hemoglobin F (fetal Hgb). May be thalassemia.
**SS:	Homozygous for hemoglobin S. This is sickle cell disease. (also called sickle cell anemia).
**CC:	Homozygous for hemoglobin C. These persons may develop hemolytic anemia.
**SC:	Heterozygous for both sickle hemoglobin and hemoglobin This is SC disease and these individuals may present a clinical picture similar to SS sickle cell disease.
**SA:	These are heterozygotes, but the position of the lette indicates that there is more abnormal than normal hemoglobin present. These may be S or C thalassemias. Further work-up, including family study, is indicated.

* Patients with sickle trait and those who are heterozygous for C or D should have othe family members screened if this has not already been done. Refer preschoolers to the CHS and older children and adults to the District Sickle Cell Screening Clinic for th Refer all parents of these children to PHN for counseling. Educational materia for this purpose is available from Dr.. Donna O'Hare, Asst. Comm. for Maternal & Child Health Services, Tel. 566-8132.

** These patients will require further study and should be referred to a Bureau for Hand capped Children approved hematology clinic (where possible) for additional study or treatment. Family members require referral for screening as above.

*** This and preceding information on hemoglobin electrophoresis is based on material in the Laboratory Manual for Hemoglobinopathy Detection of the U.S. Dept. of HEW, prepar by Dr. Robert H. Schmidt, and on material from "Clinical Hematology" by N. M. Wintrob Fifth Edition.

RECORDING - Each hematology test done must be entered by name of test and date, EACH ON A SEPARATE LINE under "Other Laboratory Tests" on the Child's History Record (Form 3K). A copy of the test results will be forwarded by the laboratory to the Child Health Station where results of each test will be entered next to the above entry for each specific test.

At that time of the next visit, MD/PNA/PHN informs parent of normal test results, interprets findings if necessary and enters test results of specific test and date on child's immunization book under "Other" on inside of back cover.

STORAGE & DELIVERY - All specimens must be refrigerated after collection. The District Managers will arrange for pick-up and delivery of specimens to the laboratory on a daily basis. The only exception if for tests done in Friday sessions which will be picked up on Monday. When arrangements are made for delivery of specimens to the health officer, specimens must be put in the same refrigerator in the health center where district lead specimens are stored.

SUPPLIES - All requisition forms and laboratory supplies required for this program will be sent to the districts in a combined packet from Bureau of Laboratories. All clinics should request supplies at least 1 month in advance from the District Manager who in turn should send a written request (on Bureau of Labs EPSDT request form) to Bureau of Labs.

VIII. SCREENING URINALYSIS

All toilet trained toddlers are to have a screening urinalysis which is to be repeated yearly. A "dip stick" test for albumin Ph, glucose and occult blood is to be used. In pediatric treatment clinics where laboratory equipment and technicians are available, a specific gravity test and microscopic examination of the urine are also to be done on all toilet trained children.

Children with a trace or 1 + protein must have the test repeated on a fresh "clean" specimen. In such cases, the parent should be instructed to wash the child's urethral area with tap water or with mild soap and water, followed by rinsing with plain water immediately before having the child void into the container. Children with continued proteinuria on this "clean" specimen, as well as those with 2 + proteinuria or over on the initial specimen, must be referred for further work-up. Children with any amount of glycosuria should also be referred for work-up.

If there is any reason to suspect the presence of a urinary tract infection, the child should be referred to a hospital for a complete urine cluture.

Results of screening urinalysis and all other urine tests are to be recorded under "Other Laboratory Tests" on the Child's History Record (Form 3K), by date and name and results of specific screening tests done.

IX. VISION SCREENING

Although formal vision testing will not be done routinely before 3 years of age, the following procedures are to be utilized on all infants and pre-schoolers:

(1) The medical history should include history of any eye problem in the family as well as previous or present eye conditions/problems.
(2) Observation of the infant's/child's reaction to an object of interest such as a light or a familiar toy can be used as indication of vision. This is checked separately for each eye.
(3) Motility screening tests should include:
    (a) gross inspection of the eyes to determine the presence of any obvious strabismus.
    (b) observation of the position of the corneal reflection in each eye when a light is used as a fixation target.
    (c) the "cover test" to determine any movement to assume fixation on a target held by the examiner when first one eye is covered and then the other eye. This test is especially valuable in patients with a small amount of deviation not observed grossly. This small deviation can be noted in the movement of the deviated eye to fixate directly on the target when the opposite eye is covered.

At 3 years of age and over a screening visual acuity test for distance is to be performed. This is to be repeated yearly. The illiterate "E" Game (Snellen Test) or a series of pictures of familiar objects (umbrella, apple, house, in graded sizes) is to be used.

For complete description of Snellen Test technique refer to previous service orders by the Bureau of Child Health on vision testing and "A Guide for Eye Inspection and Testing Visual Acuity of Preschool Children," available from the National Society for the Prevention of Blindness, Inc., 79 Madison Avenue, New York, N.Y. 10016.

Note that Snellen 10-ft chart may be used in clinics without a 20-ft space for testing.

Testing area must be reasonably quiet and free from distraction. The eye chart must be illuminated adequately and so placed in testing area that an average sized child's eye will be level with the 30-ft line.

At 3 years of age and over a test for stereopsis (depth perception) the so-called "Fly Test" must be done in addition to the visual acuity test and repeated yearly. For a complete description of this test see the booklet called "Stereo Tests" by Titmus Optical Co., Inc., Petersburg, Virginia 23803. This booklet is contained in the vision screening packet supplied to each Child Health Station and Pediatric Treatment Clinic.

Occasionally there are 3-year olds who "do not seem to understand" the screener and cannot therefore be conditioned sufficiently for reliable testing. When this occurs the PHA must confer with the PHN who will decide whether the child is "at risk" for a visual abnormality and if so refer to a treatment agency. Children determined not to be "at risk" will be returned to the CHS in a few months for the vision test. In all cases where the vision test could not be done - regardless of reason - a dated note must be entered on Child's Medical Record (Form 3K) under "Vision Screening" stating reason why test was not done and signed by the PHA.

At age 5 years and over near vision is also to be tested by use of the "Rosenbaum Pocket Vision Screener" which has already been provided to each Child Health Station and Pediatric Treatment Clinic. Additional supplies of the pocket screener if needed can be obtained free of charge from:

SMP Division, Cooper Laboratory (PR) Inc.
P.O. Box 367
San German, Puerto Rico 00753

The same technique in covering the eyes is followed as for the distance Snellen Test with the exception that for the near vision test the card is held 12 - 14 inches from the child's face.

The following criteria should be used for referral of infants and preschool children for complete opthalmologic evaluation:

(1) All infants with a significant history and/or abnormal findings on physical examination of the eyes.
(2) All children who consistently present any of the signs of possible visual disturbances, regardless of visual acuity.
(3) All children with acuity test results (near or distant test) according to age as follows:
    (a) 3 year olds with visual acuity of 20/50 or less.
    (b) 4, 5 and over year olds with visual acuity of 20/40 or less.
    (c) children who show a one line or more difference between the 2 eyes even with passing standards, e.g., using the isolated E, right eye tests 20/30, left eye 20/20.
    (d) testing by the linear method (complete line) a two line difference between each eye, e.g., right eye 20/40, left eye 20/20.
(4) All children who fail to indicate three dimensional vision for each of the three animals on the stereopsis test (Fly Test).

Whenever possible, children requiring referral should be referred to a Department of Health Eye Clinic or Bureau for Handicapped Children approved center for Eye Conditions.

All vision tests done are to be recorded under "Vision Screening" on Child's Medical Record (Form 3K) by date, name of particular vision test done and its resu

Initial supplies for all vision screening tests have been purchased and distributed by central office - one packet to each Child Health Station. Particular care must be taken with the glasses supplied in the stereo test kit. It is the responsibility of Child Health Station staff to notify the District Health Manager when any item is lost, broken, etc. The Districts will be responsible for the care of the vision testing materials and for their replacement should this be necessary.

X. AUDIOMETRIC SCREENING

Although formal audiometric testing will not be routinely done on infants and children under 3 years of age, the following points in the medical history are of great importance in all infants and children in order to delineate the possibly hard of hearing infant or child at the earliest possible time:

High risk group for hearing loss by history: prenatal history of toxemia, rubella, eclampsia, Rh incompatibility; perinatal history of marked prematurity, anoxia, jaundice, meningitis, encephalitis, sepsis, seizures; exposure of mother to ototoxic drugs (streptomycin, kanamycin, neomycin, quinine); family history of deafness; history of frequent ear infections or hearing loss.

Age-specific questions to be elicited for possible hearing problem are:

0 - 1-year old

Does he respond to sound from another room or when spoken to from out of sight?
Does he imitate his sound or other sound?
Does he wake up when you walk into the room?
Does he respond to outside sounds when in the carriage?
Does he always watch your face when you are speaking to him?
Does he stop crying when you talk to him?
Has he stopped babbling and not started talking to himself?
Does he respond to an unseen source of sound, e.g., wrist watch?

1 - 2 years old

Single words at one year old and 3-word phrases at 2 years old?
Do you think the child hears?
How does the child tell you what he wants? Gestures or speech?
Does the child talk with himself while playing? Does he use laughter?
Does he respond to the telephone ringing?

2 years old and older

Does he turn the television sound up?
Does his hearing fluctuate - particularly with colds?
Do you think he hears?
How does he tell you what he wants? Gestures or speech?

Physical examination including otoscopic, oral pharynx and nasal passages and a gross test for hearing are to be done on all infants and children as part of every routine physical exam. A description of findings, both positive and negative must be included in the clinicians write-up of the physical examination.

At age 3 years and above a yearly audiometric screening examination is to be done. The sweep test is to be performed at the following frequencies: 1000, 2000, 4000 and 6000 Hertz. Children who fail the sweep test are to be given a threshold test by the audiologist or under the supervising audiologist's direct supervision following the sweep test. In addition, all children age 3 and above who have a history of hearing difficulties, speech or language problems, learning disabilities or emotional difficulties must receive a threshold test by the supervising audiologist.

The PHA should check the audiometer periodically by doing a sweep test on a young adult with normal hearing or by determing her own threshold.

A. Sweep Test (Pure Tone)

Seat the child being tested so that he faces PHA but cannot see the dials of the audiometer or watch the movements of the tester. It is important for the PHA to see the child's face in order to study his reactions.

Place the receiver of the audiometer carefully over the child's ear so that the opening in the receiver is lined up directly with the opening of the ear canal. Have the child remove glasses, hair ornaments or any other obstructions that might come between the receiver opening and the ear canal. The right receiver should be placed on the right ear, the left receiver on the left ear. The child should not press or hold the earphones against the ears.

The tone control switch is kept in the normally "off" position in order to decrease the possibility of extraneous dial clicks being heard by the child. After shifting from one frequency to the next, deliver each tone in a single "spurt," and observe the child's reaction to determine whether or not his response corresponds with the delivery of the tone.

Delivery of the tone should be delayed or varied so that it is certain that the child is hearing when he says he is. Play responses can be used, e.g., having the child use an ink pad and stamp on paper when he hears the sound.

It is expected that a certain number of 3-year olds cannot be conditioned with enough certainty to proceed with the test. In this situation, the PHA should refer the child to the supervising audiologist for testing. In all cases where the audiometer test could not be done - regardless of reason - a note must be entered by date under "Other Tests" on Child's Medical Record (Form 3K) by date, stating reason why test was not done and signed by the PHA.

The procedure for the sweep test is as follows:

1. Start with the right ear at the test fequency of 1000 Hz. Introduce the tone at a sufficiently high intensity (i.e., 50 db 1969-ANSI) so that the child can experience the tone without strain or effort and learn the sounds for which he is to listen.
2. Decrease the intensity to the 25 decibel level. Maintain this decibel level throughout the test.
3. Test the responses at the 1000, 2000, 4000 and 6000 Hz (frequencies).
4. Recheck the 1000 frequency again.
5. Follow the same procedure for testing the left ear.
6. Record test results under "Other Tests" on page 3 of Child's Medical Record (Form 3K). Failures must also be recorded on Hearing Test Worksheet, Part I. Sweep Test(BHC Form 5
7. Earphones should be cleaned in between tests by wiping (not spraying) with zephyrin chloride aqueous solution 1:750.
8. Turn off the audiometer when not in use.

If a child fails to hear one or more of the test frequencies in either or both ears, he has failed the screening test and should be given an appointment to return for a threshold test by the supervising audiologist.

B. Threshold Test (Pure Tone)

It is advisable to test the child's right ear first, beginning at the test frequency 1000 Hz. After the child's hearing threshold for this test frequency is determined, proceed to obtain his hearing threshold for the remaining progressively higher test frequencies (2000, 4000, and 6000 Hz). When this is completed, retest the child's hearing acuity in the right ear at the test frequency 1000 Hz. Follow the same test procedure to obtain the hearing thresholds for the child's left ear. The threshold for each of the various test frequencies is determined as follows:

---

*BHC Form 515 is supplied by supervising audiologist's and the Bureau for Handicapped Children.

1. Present the test tones at the 50 decibel level. If the tones are not heard at this level, increase the intensity in 10 decibel steps until the child responds to the sound. Keep the tone-control switch in the normally "off" position in order to decrease the possibility of extraneous dial clicks being heard by the child.
2. Decrease the intensity of the tone in 10 decibel steps until the child indicates that the tone is not heard.
3. Increase the intensity of the tone in 5 decibel steps until the child indicates that the tone is heard again.
4. Repeat this threshold-seeking maneuver until you obtain identical response at least 50 percent of the time. The response received will be the child's threshold of hearing.
5. Record the threshold values for each test fequency on the child's Hearing Testing Worksheet (BHC Form 515). If consistent responses cannot be obtained for a given frequency, obtain the thresholds and complete the audiogram for the other frequencies, then return to the frequency that gave the difficulty. If the acuity of the ear first tested shows a significant loss, retest this ear after the test has been completed on the other ear. When administering this test, avoid presenting the tones in rhythmic sequences and take into consideration the reaction time of the child being tested.
6. Turn off the audiometer when not in use.
7. Earphones should be cleaned in between tests by wiping (not spraying) with zephyrin chloride aqueons solution I:750)
8. Record fact that threshold test was done, general result (pass/fail), date and name of tester under "Other Tests" on page 3 of Child's Medical Record (Form 3K).

Referral to an approved Speech and Hearing center for complete evaluation must be made for:

1. all infants and children on whom a reasonable suspicion of hearing loss and/or speech problems exist following a history and physical examination as outlined above.
2. all children age 3 or over on whom the threshold test shows a hearing loss of 25 db or more (1969-ANSI) in the same ear for one or more frequencies.

Training sessions for PHA's in audiometric testing procedures have already been conducted. Assessment of the testing techniques of each individual PHA will be the ongoing responsibility of the supervising audiologist.

Supervising audiologists will also be responsible for visiting each CHS within their jurisdiction, assessment of the individual CHS concerning its physical environment in relation to sound levels and testing capabilities, giving advice to each district regarding testing capabilities and necessary logistical changes in each Child Health Station, making ongoing assessments of the audiometers in relation to their service and calibration, developing training sessions for other district personnel as indicated, attending each Child Health Station during a screening session at least once every two weeks.

The supervising audiologist will also be responsible for doing all threshold tests, or directly supervising the PHA doing the threshold test. Need will arise to have the supervising audiologist do the repeat testing on some children who initially failed or who were untestable because of conditioning problems. In all these cases, the testing by the audiologist will have to be done at the time of a scheduled revisit appointment for the child.

All supervising audiologists will report directly to the Bureau for Handicapped Children for ongoing supervision and for administrative functions.

Supervising audiologists will be responsible for assuring that audiometric testing procedures in the Guidelines for the EPSDT are adhered to in a satisfactory fashion. They will be expected to foster communication between the districts, the Hearing and Speech Centers and the Bureau for Handicapped Children and Child Health regarding maintenance of standards.

Audiometers have already been purchased and delivered, one for each Child Health Station. If this equipment is unusable or breaks, the respective supervising audiologist or the Bureau for Handicapped Children should be notified at once.

XI. STATISTICS AND RECORDING

Certain statistical counts must be supplied to the state as part of the EPSDT Program and will be described in separate service orders, issued as required. Wherever possible the specific items will be incorporated into on-going child health statistics. When necessary, separate forms will be issued by the Bureau of Child Health to facilitate data collection.

Since the periodicity of EPSDT examinations is age-determined and coincides with the visit schedule for preventive health care, it will be essential that when an EPSDT examination is complete this fact be noted in the clinical record. Therefore, a dated notation "EPSDT COMPLETED" must be entered in red ink the weight column on the 3XI every time an EPSDT examination is completed. Note that when laboratory tests are part of such an individual examination, the EPSDT screening is not completed until test results are returned from the laboratory and recorded in the clinical record.

This includes tine test readings which must be done and recorded in the record to constitute a complete EPSDT examination.

BUREAU OF CHILD HEALTH - CHILD HEALTH STATIONS AND PEDIATRIC INPATIENT CLINICS
SUMMARY SHEET FOR ROUTINE EPSDT (CHAP) PROCEDURES AND VISIT SCHEDULE

PROCEDURE / AGE	Under 6 Wks.	6 Wks.	3 Mos.	4½ Mos.	6 Mos.	9 Mos.	12 Mos.	15 Mos.	18 Mos.	2 Yrs.	2½ Yrs.	3 Yrs.	4 Yrs.	5 Yrs.
History	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Physical Examination	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Developmental Assessment	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dental Screening	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hemoglobin Electrophoreses							X							
Hematocrit					X		X			X				X
Micro-Lead							X			X				
Urinalysis												X	X	X
Vision Acuity Screening												X	X	X
Stereopsis Test												X	X	X
Near Vision Test														X
Audiometric Screening												X	X	X
Immunization		DPT OPV	DPT OPV	DPT OPV		TINE	MEASLES MUMPS RUBELLA		DPT OPV BOOSTERS	TINE		TINE	TINE	TINE DPT & OPV BOOSTERS
Exam #	01	02	03	04	05	06	07	08	09	10	11	12	13	14
Age Range	0-5 wks.	> 5-9 wks	> 9-15 wks	> 15-21 wks.	> 21-30 wks.	> 7½-10½ mos.*	> 10½-13½ mos.	> 13½-16½ mos.	> 16½-21 mos.	> 21-27 mos.	> 27-30 mos.	> 30-44 mos.	> 44-56 mos.	> 56-66 mos.

ND: For a first visit at any age a child should have all laboratory tests and screening procedures up to that age. It is strongly recommended that all infants have a visit prior to the 6 week visit.

*Note: A half month equals 15 days. E.g., if a child is 13 months and 16 days old, he would be receiving Exam # 08.

APPENDIX B

PROJECT DATA COLLECTION FORMS

E.P.S.D.T. DEMO LINKAGE TO C.H.A.P.

EPSDT-10

Card Type 1 1 (1-2)
Date of Interview (3-8)
Recert. Site (9)
Client's I.D. Number (10-20)
CHS No.

Case Name - Last (21-32)
First (33-41)
(42-43)

Address - No. and Street
Apt.
Boro B X
Zip Code (44-48)
Declination? (49)
Telephone

I have been offered CHAP Services and I decline to accept them.
Parent's Signature: ____________ Date: / /

Child's Name - First / Last	Sex	Date of Birth	Action Code	Prov. Code
Last	(50)	(51-56)	(57-58)	(59-60)
Last	(61)	(62-67)	(68-69)	(70-71)
Last (Card Type 1 2 (1-2) DUP 3-20)	(21)	(22-27)	(28-29)	(30-31)
Last	(32)	(33-38)	(39-40)	(41-42)
Last	(43)	(44-49)	(50-51)	(52-53)
Last	(54)	(55-60)	(61-62)	(63-64)
Last	(65)	(66-71)	(72-73)	(74-75)

* Client requests assistance for transportation ☐ Other ☐ ____________

(Sign.) ____________

(Tel.) (Date)

Card Type 1 3 (1-2) DUP 3-20

Client Info: (Mother or Guardian)

Months on Medicaid (current eligibility)	(21-22)
Language	(23)
Age	(24-25)
Ethnic Group	(26)
Yrs. Educ. Completed	(27-28)
Yrs. Residence NYC	(29-30)
Marital Status	(31)
Source of Help in Emergency?	(32)
Employed?	(33)
Mos. on Pres. Job	(34-35)
Total # People in Household	(36-37)
Child's Health Decision Maker	(38
Child's Head of Household	(39)
OCIH Referral?	(40)
If CHS Appt. Made: "show" at what appt?	(41)
Partial or Comp. show	(42)
Primary Method and No. of Follow-up Attempts	(43-44)
Interviewer Job Code	(45-46)

EPSDT - REGISTRATION SHEET

Child's Name ______________________________
& Address ______________________________
Zip Code ______________
Telephone ______________

Referred by:

Newspaper Ad	1	Letter Notice	5
Radio/TV Notice	2	Walk-in	6
Mailed Flyer	3	Welfare Worker	7
Recert. Site	4	Neighbor	8

Other Agency (specify) ______________ 9
Other (specify) ______________ 0

Months on Medicaid ☐☐ (32-33)

Referred By: ☐ (34) ☐☐☐ (36-38)

New to P.T.C.? ☐ (35)

Card Type-CHS 2 1 ☐ (1-3)

Date ☐☐☐☐☐☐ (4-9)
MO DAY YEAR

CHILD'S:
Sex: M-1
F-2 ☐ (10)

Project No. ☐☐☐☐ (11-14)

Birthdate ☐☐☐☐☐☐ (15-20)
MO DAY YEAR

Medicaid Number ☐☐☐☐☐☐☐☐☐☐☐ (21-31)

Transportation to CHS:
Own Car 1
Walk 2
Bus/Subway 3 ☐ (39)
Friend/Rel 4
Other (specify) 5 ______________

	Mo	Fa	G.Par	Oth Rel	Other(specify)	
Child's Head of Household?	1	2	3	4	5 ________	☐ (40)
Child's Health Decision Maker?	1	2	3	4	5 ________	☐ (41)

Mother's Name ☐☐☐☐☐☐☐☐☐☐☐☐ ☐☐☐☐☐☐☐☐☐
Last (42-53) First (54-62)

Address ______________________________

Telephone No. for contact: Work ________ Home ________
Medicaid Number ________

Occupation ______________

Do you have someone you call upon for help in case of family problems, accidents or illness? (70)
Yes - 1 No - 2

MOTHER'S:
Age ☐☐ (63-64)
Ethnic Group: B-1 W-2, Hisp-3, O-4 ☐ (65)
Yrs Ed. Completed ☐☐ (66-67)
Yrs Resident NYC ☐☐ (68-69)
Marital Status NM-1 D-2 Sp-3 W-4 DW-5 M-6 ☐☐ (70-71)

Currently Employed: Yes, fulltime = 1; Yes, part-time = 2; No=X ☐ (72)

L☐☐☐☐☐☐ (75-80)

Months on present job ☐☐ (73-74)

Father's Name ______________________________
Address ______________________________
Tel. for contact: Work ________ Home ________
Medicaid Number ______________
Occupation ______________

Currently Employed:
Yes, F/T= 1
Yes, P/T= 2
No= X
☐ (28)

Months on Present Job: ☐☐ (29-30)

Card Type 2 2 (1-2)
DUP (3-20)

FATHER'S:
Age ☐☐ (21-22)
Ethnic Group: B-1 W-2, Hisp - 3, O - 4 ☐ (23)
Yrs Ed. Completed ☐☐ (24-25)
Yrs. Resident NYC ☐☐ (26-27)
Marital Status- NM=1 D=2 Sp=3 W=4 DW=5 M=6 ☐ (31)

Other Children in Household (Relation: Bro=1, Sister=2, Other=3)

Relation	Age in Yrs.	Where Under Care?	Relation	Age in Yrs.	Where Under Care
☐ (32)	☐ (33)	☐☐ (34-35)	☐ (52)	☐ (53)	☐☐ (54-55)
☐ (36)	☐ (37)	☐☐ (38-39)	☐ (56)	☐ (57)	☐☐ (58-59)
☐ (40)	☐ (41)	☐☐ (42-43)	☐ (60)	☐ (61)	☐☐ (62-63)
☐ (44)	☐ (45)	☐☐ (46-47)	☐ (64)	☐ (65)	☐☐ (66-67)
☐ (48)	☐ (49)	☐☐ (50-51)	☐ (68)	☐ (69)	☐☐ (70-71)

TOTAL NO. OF PEOPLE IN HOUSEHOLD: ☐☐ (72-73)
TOTAL UNDER 21: ☐☐ (74-75)

EPSDT 20

Card Type Project No.

3	1				

(1-6)

198-

CHILD HEALTH STATION OR P.T.C. (Name and Address)

(7) ☐

The City of New York—Department of Health
BUREAU OF CHILD HEALTH

CONFIDENTIAL REPORT OF CHAP SCREENING

HEALTH CENTER DISTRICT
Name:
Number: ☐☐

NAME OF CHILD (Last) (First) (M.I.)

ADDRESS (Street) (Boro) (State) (Apt.)

SEX (8)
1. ☐ Male
2. ☐ Female

DATE OF BIRTH (9-14) Month | Day | Year

MEDICAID NO. (15-25) ☐☐☐☐☐☐☐☐☐☐☐

CHILD'S MEDICAID STATUS (26)
1. ☐ Not Medicaid Eligible 2. ☐ Uncertain 3. ☐ Confirmed Medicaid Eligible

CHILD'S AGE
1. ☐ Under 1 Yr.
2. ☐ 1 to 6 Yrs.

CASE NAME

IS THIS THE CHILD'S FIRST CHAP SCREENING FOR THIS FISCAL YEAR?
1. ☐ Yes 2. ☐ No

Cycle No. (27) ☐

DATE FIRST SCREENING COMPONENT STARTED (28-32) Month | Day | Year

DATE LAST SCREENING COMPONENT COMPLETED (33-37) Month | Day | Year

I	II	III			IV		V			VI			VII	VIII
SCREENING COMPONENT	TO BE DONE AT THIS SCREENING (Appropriate to Age of Child)	FINDINGS (a) Normal	Abnormal (b) New	(c) Old	REFERRAL REQUIRED (a) Yes	(b) No	REFERRAL MADE FOR MEDICAL ATTENTION (a) No	(b) Within 60 Days	(c) Later Than 60 Days	REFERRAL MADE TO (a) C.H.S. or P.T.C.	(b) Other Clinic H.D.	(c) Other Agency	RECORD COLUMN	NAME AND ADDRESS OF CLINIC OR PHYSICIAN TO WHOM PATIENT WAS REFERRED AND DATE OF APPOINTMENT
		(1)	(2)	(3)	(1)	(2)	(1)	(2)	(3)	(1)	(2)	(3)		
1. History Growth and development.	✓												38-40	
2. Physical Examination	✓													
a. Eye	✓												41-43	
b. Ear	✓												44-46	
c. Nose	✓												47-49	
d. Mouth and Throat	✓												50-52	
e. Dental	✓												53-55	
f. Head and Neck	✓												56-58	
g. Cardio-Pulmonary	✓												59-61	
h. Abdomen	✓												62-64	
i. Genito-urinary	✓												65-67	
j. Musculo-skeletal	✓												68-70	
k. Neurological	✓												71-73	
l. Condition of Skin	✓												74-76	
m. Other (Specify)	✓												77-79	CARD TYPE 3 2
3. Immunizations													DUP3-25	26-29
D.P.T.													29-31	
Polio													32-34	
Measles													35-37	
Rubella													38-40	
Mumps													41-43	
4. a. Anemia (Hemoglobin and Hematocrit)													44-46	
b. Tuberculin Test													47-49	
c. Sickle Cell Anemia (Hb Electrophoresis)													50-52	
d. Lead Test													53-55	
e. Urinalysis													56-58	
5. Speech													59-61	
6. Vision													62-64	
Snellen (Distance)													65-67	
Stereopsis													68-70	
Near Vision													71-73	
7. Hearing (Audio Screening)													74-76	
		(1)	(2)	(3)	(1)	(2)	(1)	(2)	(3)	(1)	(2)	(3)		

CASE MONITOR:

No. of Visits required to complete screen? 1 2 3 4 5 6 ☐ (77)

No. of Broken Appointments? 0 1 2 3 – ☐ (78)

No. of Screens due during Project? 1 2 3 4 5 6 ☐ (79)

SIGNATURE OF PHYSICIAN OR NURSE RESPONSIBLE FOR COMPLETION OF THIS FORM

TITLE

CHAP-1 (1/76) NOTICE: Section 1107C of the New York City Health Code requires that the confidentiality of the identity of the patients be preserved.

EPSDT - PROBLEM REFERRAL AND CASE MONITORING SHEET

(1-3)
Card Type 4 1 CHS Code

Date: ☐☐☐☐☐☐ (4-9

(10)
Sex M=1 F=2 ☐

Proj. No. ☐☐☐☐ (11-

DEAR DOCTOR:
This child has received a screening examination and a problem is suspected, as described below. Would you please complete the bottom section of this form and return it to the child's guardian, or mail it in the envelope provided. Thank You.

Child's Birthdate ☐☐☐☐☐☐ (15-20)

Child's Medicaid No. ☐☐☐☐☐☐☐☐☐☐☐ (21-31)

Resource ☐☐ (32-33)

CHILD HEALTH STATION

Child's Name ______________________________
(Last (First)

Address ______________________________

Telephone ______________________________

PROBLEM HISTORY:
Completely new to child's caretaker ____
Previously known but not Under Care ____
Previously under Care ____
Already Under Care ____ ☐ (34)

REASON FOR REFERRAL: ______________________________

(35-37) (38-40)
Major ICDA Category ☐☐☐☐☐☐

(Fold) PLEASE ANSWER THE FOLLOWING QUESTIONS AND RETURN IN THE MAIL (Fold)

Examination Date ____ Mo Day Year ☐☐☐☐☐☐ (41-

☐☐ (47-48)

PRACTITIONER

1. Do you confirm the existence of a health problem? ☐ Yes ☐ No If no, return this form as indicated.
2. If "yes" to #1, is it the same as for which referred? ☐ Yes ☐ No
3. If "no" to #2, what diagnosis is determined? ______________ Major ICDA Code (If used in your office) ☐☐☐ (49-51)
4. Is the diagnosed condition? (item 3) Chronic ☐ or Acute ☐ Symptomatic ☐ or Asymptomatic ☐ ☐ (52)
5. Is the diagnosed condition? (check on scale YOUR evaluation) 1 2 3 4 5 Mild Moderate Severe ☐ (53)

— Problem Resolution or Status —

6. Is the condition resolved this visit? ☐ Yes ☐ No
7. If "yes" to #6; in what manner?
   - a. Condition minor--treatment completed; condition now cured or inactive ☐
   - b. Condition presumed cured or inactive within 10 days of this visit with treatment prescribed ☐
   - c. Condition noted, treatment (or further treatment or counselling) not advisable or warranted ☐

8. If "no" to #6; what is the circumstance?
   - a. Remains under treatment (this office/clinic) ☐
   - b. Referral to other practitioner for diagnosis or treatment as indicated ☐

Specialty ______________ (56)

Specific practitioner suggested ______________
   - c. Condition noted, but not treated or referred, because:
     - (1) Treatment not authorized by State plan ☐
     - (2) Treatment not locally available ☐

(5 (5 (57

PROBLEM RESOLUTION OR STATUS

MONITOR

1. How many sick visits were made until problem resolution or termination? (59) ☐

☐ (60)

2. Problem Resolved: (check one)
   - a Condition minor; treatment completed 1st visit now cured or inactive (Ref item 7a) ☐
   - b Condition presumed cured/or inactive within 10 days of 1st visit under treatment prescribed (Reference item 7b) ☐
   - c Condition noted: treatment not advisable or warranted (Ref. item 7c) ☐
   - d Treatment plan completed, now cured or inactive (follow-up contact w/practitioner or parent) ☐
   - e Treatment terminated-maximum benefit achieved (not necessarily inactive or cured) (follow-up contact) ☐

3. Problem not resolved (check one)
   - a. Still under treatment. (original practitioner/clinic) (Ref item 8a) ☐
   - b. Still under treatment. (referred) practitioner/clinic (Ref. item 8b) ☐
   - c. Condition noted, but not treated, due to:
     - (1) Treatment not authorized in this jurisdiction (Ref: item 8c(1)) ☐
     - (2) Treatment not locally available (Ref. item 8c(2)) ☐

4. *Other problem termination* (check one)
   - a. Family declines further participation
     - (1) Failure on 3rd appointment for 1st visit ☐
     - (2) Failure on 3rd appointment for extended treatment (Follow-up with practitioner or parent) ☐
   - b. Family moved from jurisdiction (Follow-up contact or records) ☐
   - c. Family no longer program eligible (Follow-up contact or records) ☐

(5

5. Source of information for entry in 2, 3, or 4 above:
   - a Practitioner ☐ b. Practitioner staff ☐ c. Child's parent ☐ (61) ☐
   - d Other (specify) ______________

6. Primary method of follow-up for entry in 2, 3, or 4 above:
   - a. Mail ☐ b. Phone ☐ c. Personal contact ☐ (62) ☐
   - d. Other (specify) ______________

7. Current status of case (if multiple problems identified)
   - a Problems identified (problem sheets originated) (circle one) 1 2 3 4 5 (63) ☐
   - b Problems resolved or terminated as of date this form completed (circle one) 1 2 3 3 5 (64) ☐

8. Skill/or professional quality of case monitor
   - a. Nurse (PHN or other RN) ☐ b. Social worker ☐ (65) ☐
   - c. Clerk/Adm. ☐ d. Other (specify) ______________

9. Date form completed ______________
Month Day Year
☐☐☐☐☐☐
(66-71)

EPSDT-40

PROJECT COPY

☐☐☐
72 73 74

Bureau of Child Health - Department of Health - The City of New York

DEVELOPMENTAL PROGRESS CHART

Child's Name: ______________ Birth Wt. ________

Card Type: 5 2 (1-2)

Child's Sex: ☐ (10)

CIS Code: ☐ (3)

Child's Proj. No. ☐☐☐☐ (11-14)

Date: ☐☐☐☐☐☐ (4-9)

Birthdate: ☐☐☐☐☐☐ (15-20)

(Is there anything about the child's development which concerns you?)

DATE	AGE	MOTOR	ADAPTIVE	LANGUAGE	PSYCH-SOCIAL	PARENTAL
	1-2 mo.	Strong suck, swallow Prone, lifts head	Follow to midline	Strong cry	Regards face	Eye contact with baby when praised
	3-4 mo.	Head often midline Prone, head up 90°	Follows 180°	Coos, laughs	Smiles responsively	Differentiates cries Guards baby on table
	5-7 mo.	Rolls over No head lag	Pulls shirt off face Reaches for objects	Localizes sound	Knows Mother	Talks to baby Can calm baby after injection
	8-10 mo.	Sits alone Bears weight	Transfers object Thumb-finger grasp	Babbles ____ Single syllables ____ Double syllables	Aware of strangers (when placed on table)	Baby stops activity when name called
	11-14 mo.	Walks holding on	Pincer grasp	Understands no-no Looks at things pointed to One word	Imitative behavior (eg: bye-bye)	Plays nursery games Anticipates hazards
	15-18 mo.	Walks well alone	Puts blocks in cup Stacks 2 blocks	Communicates with words, gestures, jargon	Gives toy to Mother on request	Helps child feed self ____ finger foods ____ spoon
	19-24 mo.	Runs easily Squats and stands	Pencil: vertical and circular strokes	Bring ___ to me Give ___ to mommy	Does he imitate your doing house work?	Do you say "good boy" more than "no"?
	25-30 mo.	Kicks ball Throw overhand	Blocks: Imitates train with tower	Picture naming Combines 2 words	Daytime toileting	Can he mind you without being spanked?
	2½-3 yrs.	Jumps in place	Copies O	See-Quee Puzzle: Describes action	Washes and dries hands alone	Do you have him play with other children?
	3½-4 yrs.	Climbs stairs (alt. ft.) Hops	Blocks: Imitates bridge	Understands: on, under in front, behind Exam instructions	Aware of danger Play: can share	Can he play for 30 min. without your attention?
	4½-5 yrs.	Heel-toe walking	Copies + Draw-a-person (3 pts.)	See-Quee Puzzle: Tells a story	Play: Imaginative, Interactive Dresses alone	Will he leave you easily? (demonstrate)
	5½-6 yrs.	Skips on alternate ft. Can sit still	Copies ☐ Draw-a-person (6 pts.)	Describe favorite TV program (characters, story)	Do you help at home? What do you do?	Are you pleased with what he has learned so far?

APPENDIX C

HUMAN RESOURCES ADMINISTRATION
MAILING TO CHAP ELIGIBLE FAMILIES

W-1

292

The City of New York
HUMAN RESOURCES ADMINISTRATION
250 CHURCH STREET, NEW YORK, N. Y. 10013

JAMES R. DUMPSON, *Administrator/Commissioner*

Dear Parent:

If you are receiving Medicaid, your children under 21 can obtain complete medical examinations and continuing care at a clinic near your home, through the Child Health Assurance Program (CHAP).

CHAP examinations go beyond the medical treatment normally given when a child is sick. They include dental, hearing and vision exams, lab tests, complete physical exams, and immunizations. Any problems detected will be discussed with you, and all necessary follow-up treatment will be provided.

Examinations of this type can protect your child's health by detecting problems before they become serious and difficult to treat. They can also uncover medical conditions responsible for such problems as constant tiredness, reading difficulties, or poor school performance.

If any of your children are not receiving this type of medical care, I urge you to take advantage of the services offered by CHAP. You may obtain appointments for your children at any of the clinics on the enclosed list of approved CHAP facilities. The clinic which you enter on the enclosed Reply Form will contact you soon to arrange an appointment.

All children who attend Day Care Centers visited by doctors from the Department of Health will receive CHAP examinations there.

For a child seen regularly by his private doctor or clinic and receiving health care equivalent to CHAP, there is no need for you to request a CHAP appointment. However it is important that you complete the Reply Form, indicating the name and address of your child's clinic or doctor, so that we can provide him with information about CHAP and insure that your child is receiving all the health services he needs.

If you need some form of assistance in order to take your children for CHAP examinations, please check the appropriate box on the Reply Form. A representative of the Office of Community Services will contact you to discuss your needs and to make any necessary arrangements.

Please return the completed Reply Form in the enclosed envelope as soon as possil
If you have any questions about CHAP, we would be happy to discuss the program with you. Please call us at 964-1910.

Thank you for your cooperation.

Sincerely,

James R. Dumpson

James R. Dumpson
Administrator/Commissioner

The City of New York
HUMAN RESOURCES ADMINISTRATION
250 CHURCH STREET, NEW YORK, N. Y. 10013

JAMES R. DUMPSON, *Administrator/Commissioner*

Apreciados Padres:

Si usted recibe Medicaid, sus hijos menores de 21 años pueden obtener exámenes médicos completos y continúo en una clínica cerca de su casa, através del Programa de Salud Infantil (CHAP).

Los exámenes CHAP son superiores al tratamiento médico que normalmente recibe un niño cuando está enfermo. Estos incluyen exámenes dental, de los oídos y de la vista, immunización, exámen físico total y exámenes de laboratorio. Cualquier problema que se descubra será discutido con usted, y se proveerá cualquier tratamiento necesario.

Exámenes de este tipo pueden proteger la salud de sus hijos encontrando los problemas antes de que sean serios o difíciles de tratar. También pueden descubrir condiciones médicas responsables por dichos problemas como cansancio constante, dificultad al leer, o trabajo pobre en la escuela.

Si alguno de sus hijos no está recibiendo este tipo de cuído médico, le urjo que tomen ventaja de los servicios que ofrece CHAP. Usted puede obtener cita para sus hijos en cualquiera de las clínicas que aparecen en la lista de las facilidades aprovados por CHAP que le estamos incluyendo. La clínica que seleccione en la Forma de Repuesta que también le estamos incluyendo, se pondrá en contacto con usted dentro de breve para concertar la cita.

Todos los niños que están en "Day Care Centers" (Centros de Cuídos Diurnos) visitados por doctores del Departamento de Salud recibirán allí los exámenes CHAP.

Para un niño que sea visto regularmente en una clínica o por un médico privado y que esté recibiendo el cuído equivalente de CHAP, no es necesario que solicite una cita de CHAP. Sin embargo, es importante que llene la Forma de Repuesta, indicando el nombre y la dirección de la clínica o del doctor de sus hijos, de manera que nosotros podamos proveerle a ellos con información sobre CHAP y asegurales que su niño está recibiendo todos los servicios de salud que necesita.

Si necesita algun tipo de ayuda para que pueda llevar sus hijos a los exámenes CHAP., por favor marque el encacillado apropiado en la Forma de Repuesta. Un representante de la Oficina de Servicios Comunales se comunicará con usted para discutir sus necesidades y para hacer los arreglos necesarios.

Por favor devuelva llena la Forma de Repuesta lo antes posible en el sobre que le estamos incluyendo. Si tiene alguna pregunta sobre CHAP, estaremos más que contentos en discutir el programa con usted. Por favor llame al teléfono 964-1910.

Sinceramente,

James R. Dumpson

JAMES R. DUMPSON
Administrador/Comisionado

CHILD HEALTH ASSURANCE PROGRAM — REPLY FORM

PRINT THE NAMES AND BIRTHDATES OF YOUR CHILDREN UNDER 21 YEARS OF AGE IN COLUMN 1. FOR EACH CHILD CHECK ONE OF THE BOXES IN COLUMN 2 AND COMPLETE COLUMN 3 AS FOLLOWS:

- *IF YOU WOULD LIKE YOUR CHILD TO PARTICIPATE IN CHAP AT A CLINIC ON THE LIST OF APPROVED CHAP FACILITIES, CHECK BOX "A" AND PRINT THE NAME AND ADDRESS OF THE CLINIC WHICH YOU HAVE SELECTED IN COLUMN 3.*
- *IF YOUR CHILD IS ALREADY RECEIVING HEALTH CARE EQUIVALENT TO CHAP, CHECK BOX "B" AND PRINT THE NAME AND ADDRESS OF YOUR CHILD'S DOCTOR OR CLINIC IN COLUMN 3.*
- *IF YOUR CHILD ATTENDS A DAY CARE CENTER VISITED BY A HEALTH DEPARTMENT DOCTOR, CHECK BOX "C" AND PRINT THE NAME AND ADDRESS OF THE DAY CARE CENTER IN COLUMN 3.*

```
67924360          14            022
  1              0001           0776
STARK            MITCHELL
80LAFAYETTE  ST
MANHATTAN        NY     10013
```

DO NOT WRITE IN THIS SPACE

CHS # : ____________

CODE: A1 B2 C3 D4 E5

COLUMN 1	COLUMN 2	COLUMN 3	
NAME OF CHILD AND DATE OF BIRTH	CHILD'S HEALTH CARE STATUS	NAME & ADDRESS OF CLINIC DAY CARE CENTER OR PRIVATE DOCTOR	OFFICE USE ONLY
Name : ____________ Birthdate: ____/____/____ Mo. Day Yr.	A ☐ Would like exam at CHAP clinic B ☐ Already receiving equivalent health care C ☐ Attending Day Care Center visited by Health Department		
Name : ____________ Birthdate: ____/____/____ Mo. Day Yr.	A ☐ Would like exam at CHAP clinic B ☐ Already receiving equivalent health care C ☐ Attending Day Care Center visited by Health Department		
Name : ____________ Birthdate: ____/____/____ Mo. Day Yr.	A ☐ Would like exam at CHAP clinic B ☐ Already receiving equivalent health care C ☐ Attending Day Care Center visited by Health Department		
Name : ____________ Birthdate: ____/____/____ Mo. Day Yr.	A ☐ Would like exam at CHAP clinic B ☐ Already receiving equivalent health care C ☐ Attending Day Care Center visited by Health Department		
Name : ____________ Birthdate: ____/____/____ Mo. Day Yr.	A ☐ Would like exam at CHAP clinic B ☐ Already receiving equivalent health care C ☐ Attending Day Care Center visited by Health Department		
Name : ____________ Birthdate: ____/____/____ Mo. Day Yr.	A ☐ Would like exam at CHAP clinic B ☐ Already receiving equivalent health care C ☐ Attending Day Care Center visited by Health Department		
Name : ____________ Birthdate: ____/____/____ Mo. Day Yr.	A ☐ Would like exam at CHAP clinic B ☐ Already receiving equivalent health care C ☐ Attending Day Care Center visited by Health Department		
Name : ____________ Birthdate: ____/____/____ Mo. Day Yr.	A ☐ Would like exam at CHAP clinic B ☐ Already receiving equivalent health care C ☐ Attending Day Care Center visited by Health Department		

• IF YOU HAVE MORE THAN EIGHT CHILDREN, CONTINUE ON THE REVERSE SIDE OF THIS FORM

If you need assistance in order to take your children for these examinations, circle the type (s) of assistance needed:

TRANSPORTATION OTHER

Telephone number where you can be contacted ____________

Today's Date: ____________ Your Signature: ____________

Mo. Day Yr.

PROGRAMA DE SEGURIDAD DE SALUD INFANTIL – FORMA DE REPUESTA

205.

EN LETRA DE MOLDE PONGA EL NOMBRE Y LAS EDADES DE SUS HIJOS MENORES DE 21 AÑOS EN LA COLUMNA 1. POR CADA NIÑO, MARQUE UNO DE LOS ENCACILLADOS EN LA COLUMNA 2 Y COMPLETE LA COLUMNA 3 COMO SIGUE:

- *SI DESEA QUE SUS HIJOS PARTICIPEN EN CHAP EN UNA DE LAS CLÍNICAS EN LA LISTA DE LAS FACILIDADES APROVADOS DE CHAP, MARQUE EL ENCACILLADO A Y EN LETRA DE MOLDE ESCRIBA EL NOMBRE Y LAS DIRECCIÓNES DE LAS CLINICAS QUE SELECCIONE EN LA COLUMNA 3.*
- *SI SU HIJO ESTA YA RECIBIENDO EL CUIDO DE SALUD EQUIVALENTE A CHAP, MARQUE EL ENCACILLADO B Y EN LETRA DE MOLDE ESCRIBA EL NOMBRE Y LAS DIRECCIONES DEL DOCTOR DEL NIÑO O LA CLINICA EN LA COLUMNA 3.*
- *SI SU NINO ASISTE A UN DAY CARE CENTER VISITADO POR UN DOCTOR DEL DEPARTAMENTO DE SALUD, MARQUE EL ENCACILLADO C Y EN LETRA DE MOLDE ESCRIBA EL NOMBRE Y LAS DIRECCIONES DEL DAY CARE CENTER EN LA COLUMNA 3.*

COLUMNA 1	COLUMNA 2	COLUMNA 3	OFFICE USE ONLY
NOMBRE DEL NIÑO Y FECHA DE NACIMIENTO	ESTADO DE CUIDO DE SALUD DEL NIÑO	NOMBRE Y DIRECCIÓN DE LA CLÍNICA. DAY CARE CENTER O DEL MÉDICO PRIVADO	
Nombre Fecha de Nacimiento: / / Mes Dia Ano	A ☐ Deseo exámenes en una clínica de CHAP B ☐ Está reciviendo cuido equivalente de salud C ☐ Está en un Day Care Center visitado por el Departamento de Salud		
Nombre Fecha de Nacimiento: / / Mes Dia Ano	A ☐ Deseo exámenes en una clínica de CHAP. B ☐ Está reciviendo cuido equivalente de salud C ☐ Está en un Day Care Center visitado por el Departamento de Salud		
Nombre Fecha de Nacimiento: / / Mes Dia Ano	A ☐ Deseo exámenes en una clínica de CHAP. B ☐ Está reciviendo cuido equivalente de salud C ☐ Está en un Day Care Center visitado por el Departamento de Salud		
Nombre Fecha de Nacimiento: / / Mes Dia Ano	A ☐ Deseo exámenes en una clínica de CHAP B ☐ Está reciviendo cuido equivalente de salud C ☐ Está en un Day Care Center visitado por el Departamento de Salud		
Nombre Fecha de Nacimiento: / / Mes Dia Ano	A ☐ Deseo exámenes en una clínica de CHAP B ☐ Está reciviendo cuido equivalente de salud C ☐ Está en un Day Care Center visitado por el Departamento de Salud		
Nombre Fecha de Nacimiento: / / Mes Dia Ano	A ☐ Deseo exámenes en una clínica de CHAP B ☐ Está reciviendo cuido equivalente de salud C ☐ Está en un Day Care Center visitado por el Departamento de Salud		
Nombre Fecha de Nacimiento: / / Mes Dia Ano	A ☐ Deseo exámenes en una clínica de CHAP B ☐ Está reciviendo cuido equivalente de salud C ☐ Está en un Day Care Center visitado por el Departamento de Salud		
Nombre Fecha de Nacimiento: / / Mes Dia Ano	A ☐ Deseo exámenes en una clínica de CHAP B ☐ Esta reciviendo cuido equivalente de salud C ☐ Esta en un Day Care Center visitado por el Departamento de Salud		

SI TIENE MAS DE OCHO HIJOS, CONTINUE EN EL LADO OPUESTO DE ESTA FORMA

Si necisita asistencia de manera que pueda llevar sus hijos a estos exámenes, haga un círculo en el tipo de asistencia que necesita:

TRANSPORTACION OTRA

Número de teléfono donde pueda ser localizada ____________

Fecha de hoy: ____ / ____ / ____ Su Firma ____________

Mes Dia Año

Rev. 6/76

CHILD HEALTH ASSURANCE PROGRAM

LIST OF PARTICIPATING CLINICS - LISTA DE LAS CLINICAS

QUEENS

FOR CHILDREN UNDER 6 YEARS OLD WHO ARE NOT IN SCHOOL

Jamaica District Health Center
Child Health Station
90-37 Parsons Blvd., Queens 11432

Child Health Station
104-04 Corona Avenue, Queens 11368

Woodside Houses
Child Health Station
50-53 Newtown Road, Queens 11177

Ridgewood
Child Health Station
769 Onderdonk Avenue, Queens 11127

Child Health Station
146-39 105th Avenue, Queens 11435

Corona Flushing District Health Center
Child Health Station
34-33 Junction Blvd., Queens 11372

FOR CHILDREN AGES 0 - 18

Project PRYME
67-10 Rockaway Beach Blvd.
Arverne, Queens 11692
(67th St. & Rockaway Beach Blvd.)

Long Island Jewish-Hillside Medical Center
New Hyde Park, New York 11040
(270th Street & 76th Avenue, Queens)

FOR CHILDREN AGES 0 - 20

Jamaica Hospital
Ambulatory Care Pavilion
VanWyck Expwy. & 89th Ave., Queens 11418

Booth Memorial Medical Center
Main Street & Booth Memorial Avenue
Flushing, Queens 11355

****

STATEN ISLAND

FOR CHILDREN UNDER 6 YEARS OLD WHO ARE NOT IN SCHOOL

Richmond District Health Center
Child Health Station
51-63 Stuyvesant Place, S.I.

Child Health Station
111 Canal Street, S.I. 10304

Child Health Station
166 Lockman Avenue, S.I. 10303

Child Health Station
31-1st Street, S.I. 10306

CHILD HEALTH ASSURANCE PROGRAM

LIST OF PARTICIPATING CLINICS - LISTA DE LAS CLINICAS

BRONX

FOR CHILDREN UNDER 6 YEARS OLD WHO ARE NOT IN SCHOOL

Melrose Houses Child Health Station
348 E. 156th Street, Bx. 10455

John Adams Houses Child Health Station
755 E. 152nd Street, Bx. 10455

Daniel Webster Houses Child Health Station
401 E. 168th Street, Bx. 10456

Tremont District Health Center
Child Health Station
1826 Arthur Avenue, Bx. 10457

Tremont Annex Child Health Station
1826 Arthur Avenue, Bx. 10457

Fordham-Riverdale Child Health Station
2428 Belmont Avenue, Bx. 10458

Mitchell Houses Child Health Station
185 Willis Avenue, Bx. 10455

Morrisania District Health Center
Child Health Station
1309 Fulton Avenue, Bx. 10456

Forest Houses Child Health Station
1005 Tinton Avenue, Bx. 10456

Westchester-Pelham Bay Child Health Station
2527 Glebe Avenue, Bx. 10461

Gunhill Houses Child Health Station
3450 White Plains Road, Bx. 10467

James Monroe Houses Child Health Station
816 Soundview Avenue, Bx. 10473

FOR CHILDREN AGES 0 - 20

Hunts Point Multiservice Center
661 Caldwell Avenue, Bx. 10455
(Caldwell & Westchester Avenues)

Martin Luther King, Jr. Health Center
3674 Third Avenue, Bx. 10456
(Third Avenue & 170th Street)

FOR CHILDREN AGES 13 - 18

Albert Einstein College of Medicine
Comprehensive Family Care Center
1175 Morris Park Avenue, Bx. 10461
(Morris Park Avenue & Williamsbridge Road)

APPENDIX D

PROJECT BROKEN APPOINTMENT REMINDER LETTER

Dear ______________,

We missed you on ________________ (date). Perhaps the appointment slipped your mind, or something just came up. Let us make another appointment for you. If we are to help you keep your child healthy and happy, you should bring _____________ to the child health stations regularly. That way, if anything is wrong we can find it before it becomes serious.

If you call me at ____________ I will be happy to arrange a new appointment.

Sincerely,

____

Case Monitor

Respetable:

Lo hechamos de menos __________ Se olvido, o algo le impedio eumpliv con la citz. Permitzque haga otra citz Si quiere mantener su nino saludable y contento debe de traer a ____________ al centro de salud para ninos regularmente. Asi, si algo vamal podemos encontrarlo antes de que se convierta en algo serio. Si me llama al ______________ con mucho qusto le hare una cita nueva.

Respetuosamente,

____

Case Monitor

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